Volume Twelve Number 6

THE VOLTA REVIEW

Formerly The Association Review

AN ILLUSTRATED MONTHLY
OF THINGS WORTH KNOWING

SEPTEMBER 1910

IN THIS NUMBER

China Through a Car Window
By Mrs. Annetta T. Mills. 20 Illustrations

Notes on Science and Progress
By Alexander Graham Bell, LL. D.

Department XVI, National Education Association—Papers and Proceedings
By Mabel Ellery Adams, A. M.

The New Edition of "The Raindrop"
By Frank W. Booth

Home Training of Deaf Children
By Mrs. J. Scott Anderson

THE VOLTA BUREAU
WASHINGTON, D. C.

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THE EDITOR'S LETTER

YOU will note this month that a number of articles are by Corresponding Editors of THE VOLTA REVIEW. These Corresponding Editors constitute an international board of specialists, representing every region of the world where speech-teaching to the deaf has attained important development.

The function which they have generously consented to perform is the transmission to their fellow-members in the Association and Bureau, through THE VOLTA REVIEW, all significant developments of professional interest; in other words, each Corresponding Editor in his own proper territory is the Editor of THE REVIEW. With the co-operation of this board it is anticipated that THE REVIEW will cover every phase and development of speech-teaching with an accuracy, thoroughness, and promptitude greater than have before been deemed possible.

The resolution empowering Dr. Crouter to appoint these Corresponding Editors was passed at the May meeting of the Executive Committee. Notification of nomination was immediately sent out, but owing to the great distances which some of the letters had to go, the acceptances were not received until the entire June-July number had gone to press, with the exception of the last form, the cover pages. While, therefore, the names of the Corresponding Editors appeared in their proper place in that and in the succeeding number, it has hitherto not been possible to announce their appointment and the nature of their function in the proper place and at the opportune moment.

With a strong board of Editors to keep you constantly informed as to the progress of the work, and an Advisory Committee of seasoned workers, in addition to the executive and administrative branches, to look after matters of policy, it is probable that the organization of your Association-Bureau is now complete.

Aside from advising on matters of policy, there is a further function of the Advisory Committee to which I wish to call your attention. The members of this Committee, as well as all the officers and Editors generally, would welcome any inquiries from puzzled teachers who are confronted by some teaching problem which they are unable satisfactorily to work out alone. In this department of practical advice on practical subjects, the Association is especially strong.

Is there some detail of the five-slate system which you do not understand? The Association officers include those who developed the system.

Are you troubled with distinguishing some one of the forty-odd varieties of that tricky consonant-vowel, the letter "r"? The Editor of the Universal Alphabetics Department can help you out—to say nothing of the Founder of this Association and Bureau, who probably taught your teacher what he knows of the Universal Alphabetics.

Or maybe you can't get some one of your deaf pupils to give a good initial "k"; maybe his "s" slips away from him; perhaps he has a "peacock voice," is troubled with nasality, or suffers from a breathy utterance. There are members of this Association who have taught articulation and voice culture for more than 40 years; they might be able to help you out of your difficulties, if you ask them.

One great function of this Association and Bureau is to act as a clearing-house of information on all matters pertaining to the deaf and their instruction. It is a function that cannot be too frequently called into exercise. Please address all your inquiries in this connection to me at the Volta Building, and I shall do my utmost to get them satisfactorily answered. Those of sufficient general interest will be printed in THE REVIEW; the others will be cared for by personal correspondence.

Another new series of articles has been started in this number—a series called "Our Own Country." These articles will consist almost entirely of pictures—actual visualizations of the mar-

velous diversity of climate, geography, and products included within the boundaries of the United States. Mere words cannot tell of this diversity; it must be seen to be understood; and these pictures are to be published that those may see who may not travel.

If, as has been said, "the best way to make a patriotic American of your child is to send him traveling over the country," then these little arm-chair tours in THE REVIEW have their place in the inculcation of a proper spirit of citizenship, as well as of arousing a pride and confidence in our land. Nor, it might be added, need this result be confined alone to the children who turn over the leaves of your Association's magazine.

This number also contains a review, on page 370, of the Volta Bureau's new publication, THE RAINDROP, a series of hero tales and wonder stories for the young. Read the story which accompanies the review on page 372; read it aloud to the children about you, and see if it interests them. If it does, THE RAINDROP serves the purpose for which it was designed.

Notwithstanding the summer slackening of activity, the Association has continued to make very satisfactory gains in membership, which, if continued at the same ratio, will in no long time place your Association's magazine on a self-supporting basis and clear the endowment for the prosecution of its proper purpose—the forwarding of non-remunerative scientific and educational work relating to deafness and the deaf. Aside from a substantial number of yearly memberships, the Association has also been honored with two life memberships—one from Mr. Andrew Carnegie, of New York, and the other from Mr. Barbour Lathrop, of San Francisco.

These results have been secured entirely from the personal nominations of the Association members, as sent in on the cards which have already been sent you, and further accessions to the membership must be derived from the same source, as the by-laws of the Association provide that admission to membership is by nomination only. It is the especial desire of the Executive Committee that the members continue their nominations. Additional nomination cards will be supplied upon request.

Faithfully yours,
A. G. Bell.

THE American Association to Promote the Teaching of Speech to the Deaf, a scientific and scholarly body, was incorporated under the laws of the State of New York in 1890 "for the purpose of promoting instruction in speech to all deaf children throughout America."

In December, 1908, the Association took over and is now continuing the work of **The Volta Bureau for the Increase and Diffusion of Knowledge Relating to the Deaf.**

The two institutions labor to keep alive in the deaf the most precious acquisition of the human race, the faculty of speech, to the end that no child in America shall grow up dumb because of deafness; to obtain equal opportunities, educational or otherwise, for the deaf; correctly to inform the public regarding this great class of our population, who number some 89,000 according to the last census; and to conduct research work into the general subject of deafness and the problems arising therefrom.

The **membership** of the Association includes representatives of every system of teaching speech to the deaf that is now extant, as well as aurists, psychologists, scholars, scientists, philanthropists, the deaf themselves, and all investigators into or thinkers upon the general subject of deafness and its phenomena.

The Association accomplishes its work, namely, the promotion of the teaching of speech to the deaf and the diffusion of cognate knowledge:

1. By **publications,** including monographs and ***The Volta Review,*** an illustrated monthly magazine of general and technical interest, all the receipts from which are devoted to the purposes of the magazine itself or to furthering the work of the Association.

2. By the maintenance of **the largest technical library** of its character in the world. The library is located at the Association's home, in the Volta Building, Washington, D. C., and is open to the free use of all members.

3. By **conventions,** at which all the leading specialists in problems relating to the deaf meet for an interchange of views and for the delivery of addresses, which are later published.

4. By the preparation of **exhibits** for the purpose of enlightening the public as to the character, the importance, and the progress of the work done by the Association.

5. By contributing toward the maintenance of **a normal class** of instruction at the Clarke School, Northampton, Mass., a sum which last year was in excess of the total revenue derived from membership dues in the Association.

6. By providing **a clearing house** of information through its executive offices in the Volta Building, at Volta Place and Thirty-fifth street, Washington, D. C. This correspondence department is under the supervision of Frank W. Booth, the general secretary of the Association.

7. By maintaining **a Teacher's Information Agency,** which is free to members. Last year the Information Agency received about 70 applications from teachers, and the number of inquiries for teachers was in excess of this supply.

8. By the preparation and circulation of **exhaustive statistics and information** relating to the deaf.

9. By such additional **research work** as the Association's resources will permit.

The **annual dues are $2** and the fee for a life membership is $50. There is **no entrance fee.**

All members of the Association are entitled to its magazine, ***The Volta Review,*** free of charge for the period of membership; to a reduced rate on its publications; to the free use of its library, and to all information collateral to the purposes of the Association which may be in the possession of its officers.

A BLIND-DEAF GIRL AT THE CHEFOO SCHOOL

Yang-feng-ying is feeling the raised type with her left hand, and spelling it to her teacher, Miss Anita Carter, with her right. Fourteen months after her arrival the girl was able to recognize about 200 short sentences and many score of single words. She was then taught to write. Ultimately she will be fitted to learn speech by her sense of touch. Other pictures of the Chefoo School and its work for the Chinese seeing-deaf will appear in a subsequent installment of Mrs. Mills's article.

THE VOLTA REVIEW

Formerly THE ASSOCIATION REVIEW

An Illustrated Monthly of Facts

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CHINA THROUGH A CAR WINDOW

BY ANNETTA T. MILLS

The journal of the Montana *School for the Deaf relates charmingly how the children beg for and pore over everything relating in any way to the work of Mrs.* Annetta T. Mills *and her school for the deaf at* Chefoo, *the first in* China. *Here Mrs.* Mills *herself recounts a great trip through* China, *during which she awakened many* Chinese *officials from the spiritual sleep which has been their attitude toward schools for defectives. Incidentally she keeps a keen eye on all the picturesque sights of* The New China, *its life and exotic color. This article will be completed in the* November *number, and followed by others from Mrs.* Mills. *Those who understand the* Melville Bell Symbols *will find the* Chinese *names easy of pronunciation, as their exact sound is indicated in accompanying symbols.*

I

WE have all laughed at the fate of the first railway ever built in China — the short line running from Shanghai to the mouth of the Woosung River—how the people pulled it up, how the government paid the damage, how the English rebuilt it, and how the Chinese bought it outright, so that it could be destroyed at will as a toy they didn't need.

They had to do all that to be true to their traditions; but, then, traditions ruled the Oriental mind, and one who understood did not laugh. Some of us knew that progress would "win out" some day in the Land of the Dragon. Trust the Chinese to see where commercial advantage lies!

The Railroad in China

In the Woosung River ships of all nations meet, but only the smaller craft can reach The Bund. The great ocean liners must ride at anchor near the river mouth. Some clever mind, perhaps a young student who had been in America, realized that that special bit of road would be a good thing to have, so tradition gave way; the road was built again, and built to stay and bring in its line all the four thousand miles now in operation, the eight thousand being built, and the million projected. Eventually, with Hankow as a center, the great trunk lines will radiate north, south, east, and west, binding the whole country together with bands of steel. One line of seven hundred and fifty-five miles, connecting Peking with the river traffic on the Yang-tze, is already completed.

The service which these roads will render to China can hardly be overestimated. They will mean the developing of the untold material resources of that vast country until China will become one of the richest, if not the richest, country in the world; they will mean safety to

THE OLD STYLE OF TRAVELING

The Sedan Chair, which, according to Mrs. Mills, is now "becoming a curio"

THEIR FIRST SIGHT OF A LOCOMOTIVE

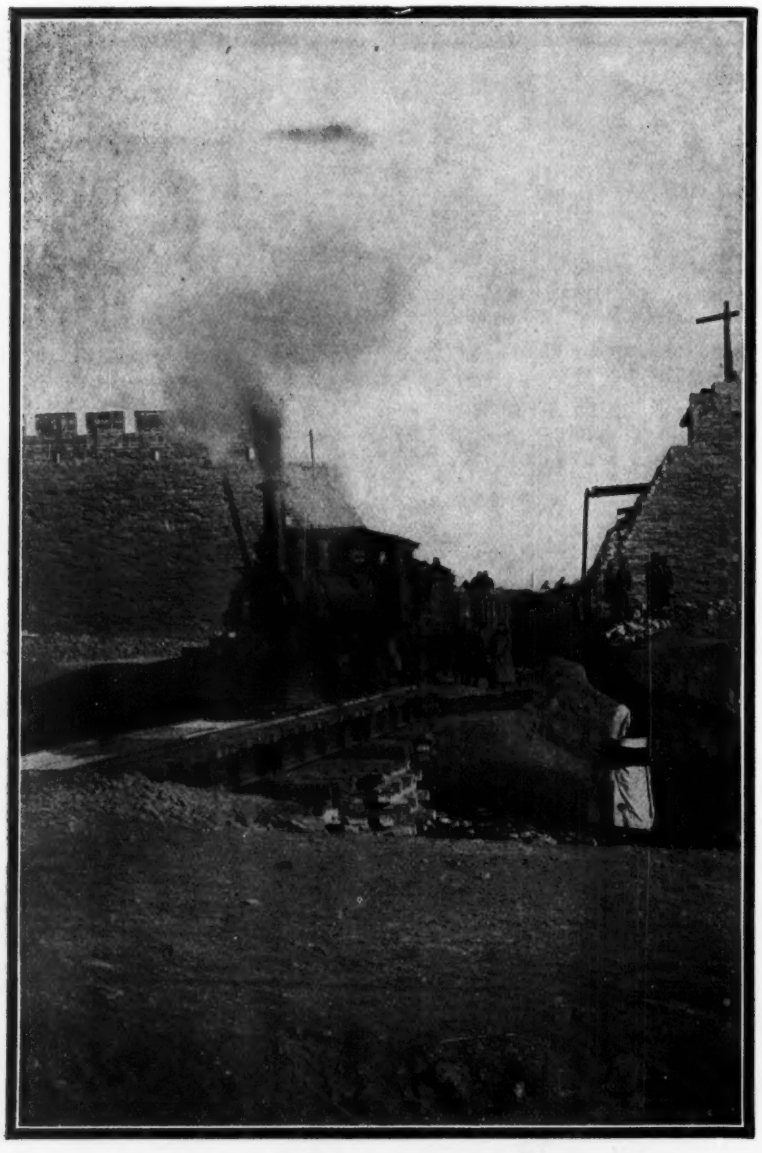
Copyright by the National Geographic Magazine, Washington, D. C.

ARRIVAL OF A TRAIN AT PEKING

City wall is in the distance. Chien Gate, rebuilt to take the place of that destroyed by the Boxers, can also be seen. Photo by H. S. Elliott

THE OLD STYLE OF TRAVELING

The Sedan Chair, which, according to Mrs. Mills, is now "becoming a curio"



FIRST TRAIN PASSING THROUGH THE WALL OF PEKING

From "China in Convulsion." Copyright, 1901, by Fleming H. Revell Company

travelers from highway robbers; the deliverance of the people from famine; the reducing of the many dialects to one common language; the quick suppression of rebellions; they will encourage patriotism and weld the country into one great whole with the motto, "China for the Chinese."

The opening of the Peking-Hankow Railway makes possible to the tourist a unique sight-seeing trip through the heart of China. For me this genie of peace and prosperity spread a magic carpet over which, during the winter of 1908-1909, I wandered far afield.

Primarily the trip was taken in the interests of education for the deaf, but long before it ended I found it was an education for myself. I had been working so closely at the task of adapting the methods of the West for teaching the deaf to the genius of the Chinese language that I had not traveled much; but now, after years of labor, the time had come and I was off for a three-thousand-mile journey, with two of my pupils and a native hearing teacher, to show the Chinese a "modern miracle."

China the Misunderstood

Twenty-five years of life in the Orient had corrected some of my childish ideas of China. I had learned that Peking was the capital and the Yang-tze-kiang the largest river in the empire. I did not know that Peking should be spelled with a "g" until I got it from the mouth of my Chinese teacher, nor that a reference to the Yang-tze-kiang "River" was a multiplication of words, for the reason that "Kiang" meant river, until I could read and speak to some extent their marvelous language, while the beautiful significance of the river's name, which in Chinese means "Son of the Ocean," was not borne in upon me until I had seen its noble length and breadth as I traversed it on a palatial river steamer. I had long ceased to fear that I should be served with dog meat or rats, as I accepted their gracious hospitality and ate their delicate tid-bits of pigeon eggs, fish, and fowl.

I knew the people and country well enough to find every step of the way replete with interest. I felt no fear, for I understood them. But how changed the China of today from twenty-five years ago! The country has held its position geographically and its relations politically to the other nations in a misty haze of indefiniteness, It was not a power to be reckoned with.

We thought of and noted only the peculiarities of the inhabitants, speaking of them as the almond-eyed people, not realizing that many have beautiful round eyes, doing them the injustice of judging a whole nation by their coolie representation in our laundries. We have thought of them as sleepy, opium-eating degenerates, with faces always looking backward to the past from the graves of their ancestors, not realizing their reserve power. We have considered them weak physically and intellectually; we called them a rice-eating people, and made fun of their chop-sticks, without knowing that two-thirds of them eat little or no rice, but live on wheat flour, millet, maize, beans, and vegetables, with little meat, and that their longevity and much of their mental power are due to this fact. Even today people are surprised to know that any part of China is cold, with ice and snow, yet we in the northern regions of this vast empire shiver over our American stoves four months out of the year.

"Learning" the Use of Flour

Speaking of wheat flour reminds me of what I read some time ago in the report of an agent of a Northwestern flour company. He said, "The Chinese are learning the use of flour. Bread can be bought at bake-shops, even in the interior towns." *Learning* the use of flour! *Bread* in interior towns! Why, the Chinese used flour and bread before America was discovered. Because their flour was not bleached out of all its nutty flavor, and because the bread was steamed or toasted, instead of being baked in loaves in an oven, was no reason why it should not be called flour and bread. The agent simply did not get to the root of things, as is often the case in such a country as

"As our train flew past the low huts of the peasantry, the Orientals, with babies strapped to their backs, watched in wonder the iron horse." This picture, together with that opposite and those on pages 328 and 337, were taken by field workers of the American Baptist Foreign Mission Society.

CHINESE PORTABLE KITCHEN

A counterpart of the American "Dog Wagon"

China. So indifferent have we been toward this old nation, one of the oldest in the world! And now the opening of the twentieth century shows this old nation turning a new face to the world. Behind this new face there lies a power that must be recognized. Our governments realize this and are making treaties with China; our business men are awake to new opportunities of commerce; our universities are eagerly looking toward this new field for intellectual research.

II.

Our journey began at Chefoo, where we took one of the northbound steamers from Shanghai to Tientsin, the port of entry for Peking. One has the choice of several lines of coast steamers, most of which stop at Chefoo. They are under the command of foreign officers and are fairly comfortable, some of them luxurious.

Arriving at Tientsin, the new part of which presents the appearance of a modern city, with electric trams, well-paved and electric-lighted streets, the steamer ties up at the new bund; unless, as sometimes happens, it fails to cross the bar at the mouth of the river and must wait for the tide, in which case one can go ashore in a sampan and take the train. They are constantly dredging the river to keep the course open. From Tientsin we went directly on to Peking by rail. traveling in comfort. The sensation of "riding on the rail" in China was peculiar. Formerly this journey would have been made in a springless Peking cart, or by donkey, mule-litter, or in a sedan-chair.

As our train flew past the low huts of the peasantry, Orientals, big and little, with babies strapped to their backs, watched in wonder the iron horse—and travel! that is the wonder of it! The third-class carriages were crowded, the second class not less so, and in the first the coupés were occupied by the officials and the high-class Chinese in silks and satins. There was a delegation of Tibetans, and we were told that the Dalai Lama from Lhasa was on board. We could not verify this, but as he was in the vicinity of Peking at the time it might well be.

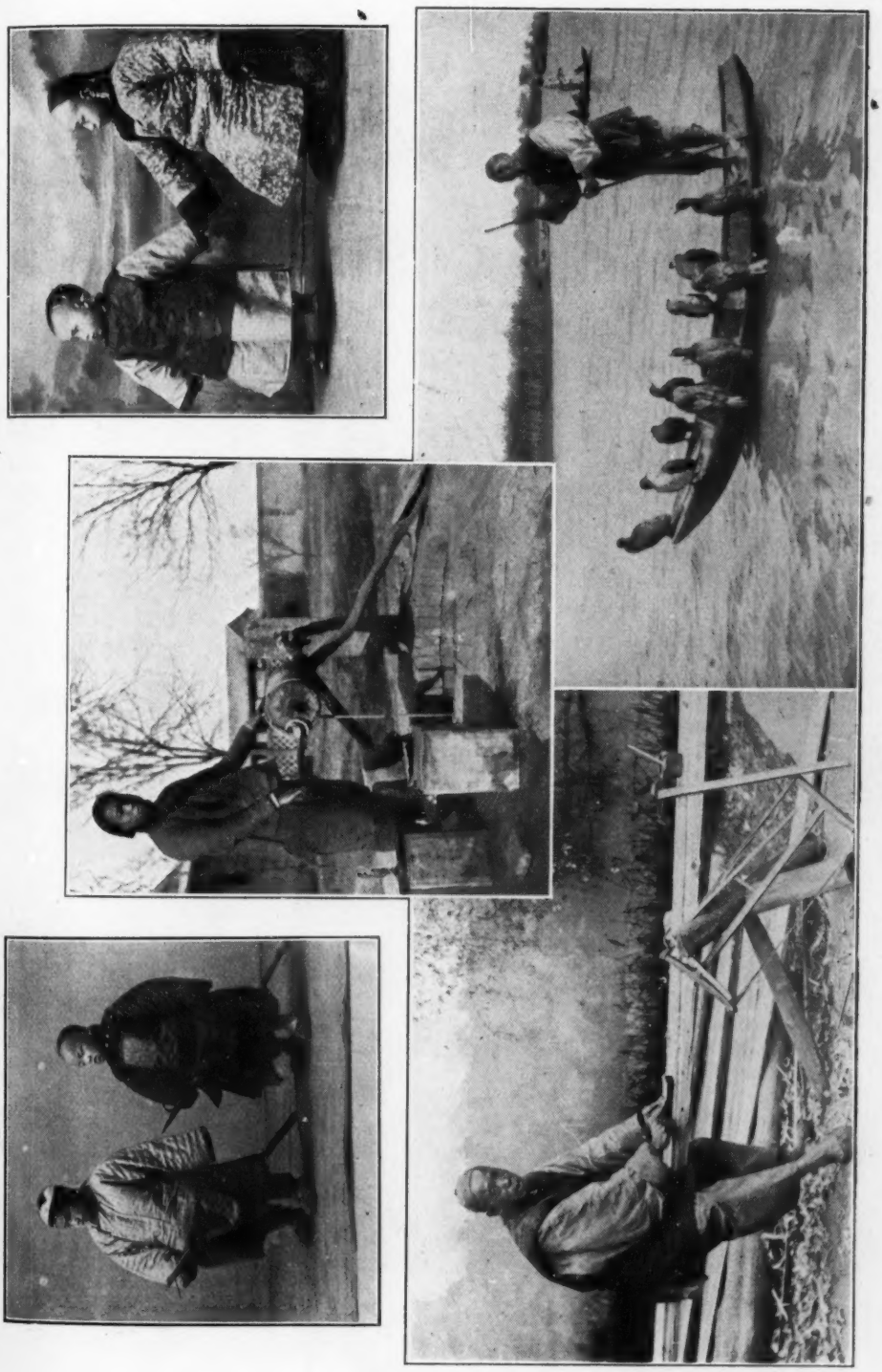
The Modern Peking

The Peking of today presents a very different face to the traveler from what it did before the uprising in 1900. The broad avenues, laid out by Yung Loa in 1400, were up to that time unpaved, or paved only with rough stones, and crowded on each side with small shops. Much of the time the cart wheels sank deep in the mud, and the rest of the time one was choked with dust. Now the cluttering shops are gone and the center of the street is well paved, with gutters on either side. Street-cleaners care for the refuse, and the heavy freight carts are relegated to what in an American city would be the sidewalks, which are still unpaved, the shops being reached from the center of the streets over stone causeways. All of the avenues are lighted, some with electricity, and there are many fine buildings in foreign or semi-foreign style. Every day down one of these avenues the Prince Regent rides to and from the palace and the new court buildings in a beautiful rubber-tired carriage drawn by a span of fine horses. The sedan-chair is becoming a curio.

I rather surprised a young Chinese gentleman by saying that Yung Loa was very far-sighted when he laid out the city with such broad avenues, as there was ample room on each side for trolley rails. He did not think that Yung Loa had trolleys in mind, but that old emperor certainly built more wisely than he knew. This laying out of Peking away back in the fourteenth century makes one pause to consider, for it suggests things that no other city in China does. It speaks of breadth, of space, of freedom, of broad ideals, and is typical of what the new China is to be.

A Visit to the Summer Palace

There is much of interest to the tourist in and about Peking besides the usual temples, even if one cannot penetrate to the hidden mysteries of the "Forbidden City." We were so fortunate as to be included, through the courtesy of the



SCENES OF CHINESE LIFE

Reading in order from upper left-hand picture: Children playing hobby-horse; servant at well; "posing for the picture;" carpenter at work; fishing with cormorants on the Yang-tse—From World Wide Missions

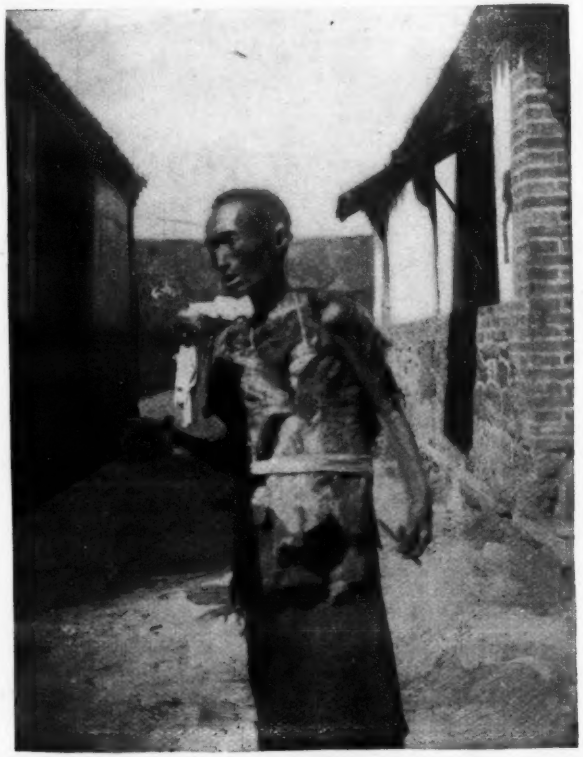
AUDIENCE HALL, PEKING, CHINA

The tiles of the roof are yellow, and portions of the woodwork are painted yellow and green. The steps and balustrade are composed of white marble, and enjoy the exception of being free from weeds

The tiles of the roof are yellow, and portions of the woodwork are painted yellow and green. The steps and balustrade are composed of white marble, and enjoy the exception of being free from weeds

TEMPLE OF HEAVEN, PEKING, CHINA

This beautiful temple is the most noteworthy of the many to be found in China, and is the center af all that is sacred to the people. The height of the building to the top of the gilt ball is a little less than one hundred feet. This is the crown of the Sacred City in the midst of the Purple City in Pekin.



From "Village Life in China," by A. H. Smith. Copyright, 1899, by F. H. Revell Co.

This picture, with the two following, are from "The Chinese," by John Stuart Thomson. Coypright, 1909, by Bobbs-Merrill Co.

A CONTRAST IN EASTERN CIVILIZATION

The beggar in his rags—the Empress Dowager in her royal robes

American Minister, in a party visiting the Summer Palace, where two officials delegated by the Wai Wu Pu (外務部) the Bureau of Foreign Affairs, received and showed us through the grounds. We saw everything from the outside only, and then were rowed across the lake to the marble boat, where an elaborate lunch of cakes, sweetmeats, fruit, and champagne was served. Some of us missed the tea.

The ride out to the Summer Palace, which takes a little more than two hours, is over a beautifully paved road, and was made in a comfortable carriage with a Chinese driver. The Austrian contingent was in an automobile. We started at ten in the morning and were back in the city by five o'clock, stopping on our return at the new Zoo and Botanical Gardens.

A never-to-be-forgotten excursion was the one we made out to the Ta Tsung Miao (大鐘寺), the Temple of the Great Bell, which lies to the right of the road to the Summer Palace. We made the first part in rickshaws and then took to the fields on foot through tangled sweet-potato vines, past patches of turnips and cabbages, skirting plots of cives and garlic, until we arrived before the gate of the red-eaved, hexagonal temple in its setting of gloomy cypresses, through which gleamed the green and yellow tiles of the roof. A small tip was the "open sesame" before which the great doors swung wide, and lo! we stood before one of the "seven wonders of the world."

The Great Bell of Moscow, renowned the world over, lies silent and useless. The Great Bell of Cathay, though not so large, is perfect and of no mean proportions. Its height is fourteen feet, its diameter at the mouth thirteen, its lip nine inches thick, and its weight fifty-two tons. There it hangs, in the dim light of the temple, "a beautiful inverted chalice," covered from lip to loop with a mass of finest relief-work. The characters, each nearly an inch long, eighty-four thousand in all, record a Buddhist book of sutras. The watches of the night are beaten on it, and it is rung in times of drought by Imperial order.

A Legend of Old Cathay

The legend of its casting, as told by the old priest in charge, is redolent of the grandeur, the romance, and the barbarism of Old Cathay. The tale runs thus: The Emperor Yung Loa ordered seven great bells to be cast. This was the largest. Again and again Kwang-Yu, "the eminent maker of guns," turned the molten metal into the immense cast and then awaited the result. Again and again there came a flaw. It did not ring true. At last the Emperor, vexed with repeated failures, gave the order that if the next casting was not a success Kwang-Lu's life should be the forfeit. He was blessed with one fair child, a daughter, the cherished image of her dead mother, called Ko-ai (阿哥), "The Beloved." When Ko-ai heard the fearful condition made by the Emperor, in despair she sought the counsel of a fortune-teller, only to be told that the successful casting of the bell required a human sacrifice. Her decision was quickly made. She would be that sacrifice. Returning to her home, she found her father, in great trepidation, preparing for the final casting. She encouraged him, assuring him that this time his efforts would be crowned with success.

As the fateful time drew nigh a great crowd came to witness the feat. Just as the great cauldron was swung into place Ko-ai flung herself into the boiling metal. A bystander, with the instinct of saving her, grasped her foot, and her empty shoe was left in his hand. As the burning liquid closed over her head she called back, "Oh, my shoe; oh, my shoe!" The casting was perfect, but the father became a raving maniac, and no more bells were cast to grace the reign of Yung Loa.

And now, as the bell's sweet tones float over the country-side, children call to one another, saying, "Ko-ai is calling for her shoe—Woa di hiei! Woa di hiei!" (我的鞋). We made our way back to the city with the spell of the past upon us, for surely Ko-ai's bell has not an equal.

(To be continued)

THE EMPRESS DOWAGER

THE GREAT BELL-TOWER

See Mrs. Mills's account of Ko-Ai's sacrifice (page 339)

EUROPEANIZING PEKING

The upper picture shows Hatamen Street ten years ago; contrast this with the lower picture, taken after the street was cleaned up and macadamized. The pictures are from "Court Life in China," by Isaac Taylor Headland. Copyright, 1909, by Fleming H. Revell Co.

A FENUGREEK BEAUTY OF TUNIS

This woman lives in Tunis, where the ideal type of female beauty is a Venus that cannot put on a "Mother Hubbard" without bursting the seams. By careful dieting, the women of this region frequently attain a weight of 250 pounds, while 300 and even 350 pounds are not uncommon.

David Fairchild, M. Sc., in charge of the Bureau of Foreign Seed and Plant Introduction, Department of Agriculture, sends in the picture with the following comment: "It is the custom in Tunis—or was, when I was there last—for a man to give a woman an anklet many sizes too large for her, with the promise that he would marry her as soon as she would be unable to slip it off. She then 'makes weight' with the aid of fenugreek, a leguminous old-world plant, famous for its fat-making properties."

NOTES ON SCIENCE AND PROGRESS*

FROM THE NOTE-BOOK OF ALEXANDER GRAHAM BELL

[Copyright, 1910, by THE VOLTA REVIEW]

SEED THOUGHTS BY THE TELEPHONE'S INVENTOR—AERIAL PROPULSION FOR SHIPS—TAPPING CABLES BY WIRELESS—TESTING SUN-RAYS AS POWER

I

AERIAL ROWING

THE great difficulty in developing an art of aerial locomotion lies in the difficulty of developing apparatus experimentally—the difficulty of profiting by past experience. A dead man tells no tales, and the actual result of erroneous construction has often been the death of the experimenter. He advances no farther and his death acts as a deterrent upon others. The hundreds, the thousands, of references to publications in my possession demonstrate the wonderful activity of the inventor's mind upon aviation and the woeful lack of experiments upon which safe generalizations can be made.

Safety for Aviators

How can ideas be tested without actually going into the air and risking one's life on what may perhaps be an erroneous judgment? Two methods suggest themselves to me:

(1) To use tethered kites and work the desired piece of apparatus attached to the kite by means of subsidiary strings. An error might lead to the death of the kite, but the operator would be safe.

The conditions are, however, not similar to those of a body moving about freely in the air. Could we, for example, judge properly of the effect of a rudder upon a ship at sea by anchoring the vessel in a stream and then shifting the rudder from side to side?

(2) The best way, it seems to me, is to place your apparatus upon a boat, or float, where it may have perfect liberty of motion and yet be supported by the water. A boat, for example, might be propelled by aerial propellers wholly out of water and steered by aerial rudders; have its bow elevated or depressed by a horizontal rudder or tail. All the propelling and steering devices that have been proposed for balloons or flying machines could be tested comparatively in this way upon a boat or, preferably, a float, so that the water should offer only a surface resistance and not produce effects through the immersion of a keel or center-board in the water.

Application to Ships

Quite independently of any application to the art of aerial locomotion, might we not hopefully seek to improve the propulsion of vessels in the water along this line of experimentation? On account of the enormous resistance of the water to a body moved rapidly through it, a limit is speedily set to the velocity of vessels in the water. Every increase of speed is accomplished only by a disproportionate increase in engine power, and all because the vessel is propelled *through* the water instead of *over* it.

Whatever resistance the water may offer to a body going through it at a certain velocity, the air would offer less resistance. If, therefore, with increase of speed the boat or vessel could be elevated more and more out of the water, so that the chief part of the resistance should be the air, would not the engine power be more economically utilized

*Transcribed from a volume of dictated notes, incorporated with Dr. Bell's diary-portfolio called "The Beinn Breagh Recorder," under dates of June 26 and November 9, 1909, and February 28 and May 19, 1910.

under such circumstances? Would not, for example, torpedo-boat destroyers be able to go at a greater speed, with the same engine power, than they do now if they were so constructed as to utilize the resistance of the air to lift them, partly, at least, out of the water?

Advantages of Aerial Propellers

In order to avoid disaster, however, the conditions of aerial support and propulsion must be understood. An express train running at sixty miles an hour has sufficient momentum and velocity to be supported in the air, wholly; but, under its present form of construction, nothing but danger need be anticipated should the wheels leave the rails, for the moment that happens the motive power ceases to propel the train.

So with a steamer on the water, the moment the propeller leaves the water the engine races and propulsion ceases. We could not safely subject a steamer going at a fast rate of speed to the chance of having her propeller lifted now and then for a few seconds out of the water; but, if the propellers should act continuously in the air, and not in the water at all, there could be no danger to the machinery, however much the vessel should be lifted out of the water.

Propel boats by aerial propellers; provide them with small, rigid aeroplanes to utilize the air as a means of support as their velocity increases. Provide them also with horizontal rudders or tails by which the bows could be steered slightly upward when going at a high speed and you have conditions that might result in vessels going *faster over the water than any vessels now afloat.*

So that, apart from the applicability of your results to aerial locomotion out of the water, your experiments might lead to important improvements in the propulsion of vessels upon the water.

Aerial Rowing

One way in which experiments could easily be commenced without the necessity of expensive engines, etc., would be to test the efficiency of various forms of wings or paddles operated by man-power, by propelling a boat by means of aerial oars. Scores of devices have appeared for propelling balloons and flying machines in this way, but hardly any of them have been tested. Why not rig a small boat with them and start aerial rowing?

II

MAKE PROPELLERS LIKE WINGS

It is to be noticed that the propellers usually employed on flying machines and dirigible balloons are like the screw propellers of steamships. But I am inclined to think that they should be like the propelling mechanism of all flying creatures, and be modeled after the wing rather than after the screw.

Wings form the universal means of propulsion in use by birds, flying mammals, and insects, and propulsion is gained by flapping one or more pairs of wings. If we study the comparative anatomy of the wing in all these classes, I think we may conclude that those features that all wings have in common are of importance in successful flight, and that the features in which wings differ are of comparatively slight importance.

Wherein Wings Are Similar

What features have wings in common?

First. They all consist of surfaces having a greater breadth than length. I think this is true even in the cases of the larger butterflies and moths. It certainly is true of all birds, mammals, and insects that are good flyers and able to make headway against the wind.

The extent of surface in relation to the weight carried varies in the most extraordinary manner. If I remember rightly, about twenty-nine and one-half square feet of wing surface is provided by Nature to support one pound of mosquito! whereas Nature provides only about one-half of one square foot per pound of duck, though both the mosquito and the duck achieve successful flight. The bat and the insect show that feathers are not necessary, and all theories based

on the supposed porosity of a bird's wing, and the passage of air through the feathers when it is raised, and the air-tight closure of the feathers during the downward stroke are shown by the wings of insects and bats not to be essential. All wings, however, are broader than they are long (length being measured in the direction of flight), and this, then, is probably an important feature in the construction of aerial propellers.

Second. Another feature apparently common to all wings is that the front edge is always of comparatively rigid matter, whereas the rear edge is flexible and elastic. In birds and mammals the heavy bones of the wing are in front, and in insects the front edge contains the comparatively stiff veins. In birds, the rear edges are composed of the free ends of the feathers; in bats, of the elastic membrane between the fingers of the hand-like framework; in insects, of the weaker portions.

Third. Wings are moved flat-ways against the air, not edge-ways. They move alternately up and down, striking the air with their flat or extended surfaces.

A Favorite Error

Much has been made of the concavity on the under surfaces of the wings of birds, but this feature is not found in the equally successful wings of insects and bats, hence is not essential.

If we picture the effect of the resistance of the air on a flapping wing, with more breadth than length and with its rigid portion in front, we may note that, on account of the comparative rigidity of the front and the elasticity of the rear edge, this rear portion gives way, to a greater or less extent, so that the rear would be tilted up by the pressure of the air when the wing is moved downward, and tilted down when the wing moves up, in both cases producing a horizontal component of motion tending to propel the flying creature forward.

But the propellors now used with flying machines and dirigible balloons differ radically from this, and are based upon the screw propellers of steamships. They are, in fact, portions of screws, which attempt to corkscrew their way through the air after the manner of a screw threaded in a block of wood. They differ radically from wings in the fact that, substantially, they move edge-ways instead of flat-ways against the stationary air. In the screw propeller there is no give at the rear, both front and rear edges being equally inflexible.

Wings, Not Screws

But I believe that the wing offers a better model than the screw. Though all flying creatures are propelled by flapping the wings, I am inclined to think that the use of machinery will render a rotary motion more desirable. But the blades of our rotating propellers should strike the air with their flat surfaces, and be adapted to give way at the rear after the manner of a flapping wing.

III

SUN-RAYS FOR POWER

The possibility of working a motor by the sun's rays is suggested to me by the remarkable effects produced on receivers containing lamp-black, soot, or carbon in a fine state of subdivision.

If we put into an empty bottle a few spoonfuls of dry soot and concentrate a beam of sunlight upon the soot the following effects are observed:

The moment the focus falls upon the soot a gushing sound is heard from the bottle, if it has a narrow neck, and if a lighted candle be held near the mouth of the bottle the flame is blown away, showing that the heating of the soot has heated the air in the bottle, causing some of it to be expelled suddenly. If we hold the hand in the path of the beam of light, then the moment the shadow falls upon the soot a sucking sound is heard from the bottle and the flame of the candle shows an indraft.

Music from Heat

These effects occur so suddenly that when the beam of light is rendered in-

termittent by passing it through holes in the edge of a rapidly rotating disc of opaque material, distinct noises are perceived every time the light is let on and every time it is cut off. By increasing the rotation of the disc we obtain from the bottle a musical tone which rises in pitch as the rate of interruption is increased. Clear musical tones are perceived, even when the interruptions occur more than 100 times per second, showing that, even at this rapid rate, alternate expansion and contraction of the air within the bottle takes place in accordance with the interruptions of the light.

The thought has often occurred that it might be well to inquire what power could be produced by the alternate expansion and contraction of confined air in this way. I propose, therefore, to construct a simple apparatus to investigate this point, modeled upon the radiophonic receiver.

A shallow circle space will be turned out of a block of brass. In this space will be placed a sheet of wire gauze coated with lamp-black, and the whole interior of the brass recess will also be smoked. Then a diaphragm of glass will be arranged to cover the shallow recess like a telephone diaphragm. A cover will be screwed on, as in the case of a telephone, to seal the space hermetically.

If the air within the space is heated it will cause the glass diaphragm to bulge out to a certain extent and with a certain force. To what extent and with what force?

To Test Sun-Power

In order to determine this point the apparatus will be placed with the glass diaphragm horizontal and above. A lever of brass will then be attached at one end to the edge of the cover and other end projecting several centimeters beyond the opposite edge of the cover, and a projection upon the lever will rest upon the center of the glass diaphragm and the free lever will be weighted. The movement of the glass diaphragm will be magnified by the free end of the lever, and the weight lifted by it will be a measure of the weight that could be lifted by the diaphragm.

In operating the apparatus a beam of sunlight will be concentrated upon the lamp-blacked wire gauze. The air in contact with it will then become heated and cause the expansion of the air within the cavity. From the action of this apparatus we may be able to determine whether any useful power could be generated in this way.

A Substitute for Mirrors

One difficulty in this connection is that glass is rather opaque to the invisible dark rays of radiant heat, so that in our apparatus we would be utilizing the heating effect of the luminous rays chiefly, the dark heat rays being largely absorbed by the lens and the diaphragm, and doubly absorbed by any ordinary mirror we might employ to reflect the sun's rays upon the lens. In an ordinary glass mirror with a reflecting surface of mercury at the back, the light has to pass through the thickness of the glass twice, once on its way to the mercury coating and a second time after reflection from that coating. Consequently great absorption takes place, and of the very rays that would be most effective for our purpose—the invisible dark rays of heat.

If we substitute for the glass diaphragm a diaphragm of ebonite or hard rubber, and for the lens and mirror a silvered concave reflector, with the reflecting surface outside (not at the back, as in a mirror), we avoid any marked absorption of the dark heat rays.

While hard rubber in thin sheets is remarkably transparent to the dark rays of heat, we might here lose the heating effect of the luminous rays, for hard rubber is opaque to light. Perhaps a sheet of mica might be better than glass or hard rubber either, for it is transparent to both sorts of rays. It is, at all events, transparent to light, and it allows the transmission of the dark rays of heat to a much greater degree than does glass. A glass fire-screen cuts off the heat of an open fire, but the mica window of a stove allows the heat to pass.

AN INSECT THAT LOOKS LIKE A LEAF

BY DAVID FAIRCHILD, M. Sc., in Charge of the Bureau of Foreign Seed and Plant Introduction, Department of Agriculture

IF you will look closely you will observe that this photograph shows an insect feeding upon a leaf, but it will take sharp eyesight indeed to determine just where the insect ends and the leaf begins. This creature is the mantis, of Java. Various members of the same species are scattered pretty widely over the Old World, and everywhere it is endowed by the ignorant with supernatural powers, thus accounting for its name, which in Greek means "diviner," or "seer."

The mantis has a most extraordinary power of mimicking the leaves of plants upon which it feeds. Its wings will imitate not only the texture and ribs of the leaves, but even their colors. I remember that on one occasion a leaf was brought to me with the remark that it might be worth an examination. I laid it aside indifferently, purposing to examine it later, and went on with the work I then had in hand till, some considerable interval afterward, my attention was attracted to the specimen again by some movement I caught "with the tail of my eye." I looked up and gasped in amazement. A mantis had been feeding upon the leaf undetected by me until it stirred! As my associate had said, that leaf "*was* worth examination."

In this picture the leaf to the right shows the kind of damage done to a plant by the feeding insect if left undisturbed in its operations.

THE JAVAN MANTIS.
The leaf to the right shows the kind of damage done by the feeding insect.

Not all the members of the mantis family are vegetarians. Wallace mentions one Javanese species which mimics a pink orchid flower and "is said to feed largely on butterflies, so that it is really a living trap and forms its own bait!"

IMPRESSIONS OF THE N. E. A. MEETING

BY MABEL ELLERY ADAMS, M. A., Corresponding Editor of THE VOLTA REVIEW

THE recent great convention of the National Educational Association in Boston furnished some interesting flash-light views reflecting many of the educational conditions and movements in our country today.

In the educational meetings—at least in the Council and the Departments of Child Study and Special Education, which absorbed all the writer's time—social and economic questions were very much more to the front than the purely educational matters concerning courses of study, methods, and text-books, which formerly occupied the stage.

There were two centers of interest—exceptional and defective children and vocational training. Each speaker naturally maintained some special thesis, but in almost every case it was for the sake of some reaction upon society rather than for the sake of the individual child that he desired a given result, or advocated a special process.

Some notes of warning were sounded. A speaker in the Council questioned how far it is right to draft the best teaching ability away from the normal children, upon whom, after all, the progress of the race must depend, and use it up on the backward and the feeble-minded. Miss Farrell, of New York, in another meeting defended the practice, on the ground that the ultimate aim of the present attention to the mentally weak was their seclusion from society with a view to the prevention of reproduction, and that for such a task the keenest minds among the teachers were needed. State Superintendent Aley, of Indiana, put in a plea for the exceptionally bright children, who ought to be especially trained as the leaders of the future. And William H. Allen, Director of the Bureau of Municipal Research, of New York City, made an emphatic statement of the paramount claims of plain, ordinary, normal children, who although after all vastly in the majority, are in danger of being neglected for the small minority of the abnormal.

In the two sessions of the Department of Special Education the President, Edward M. Van Cleve, Superintendent of the Ohio State School for the Blind, so ably managed the program that no one was hurried, and there was plenty of time for discussion.

An interesting feature of the meetings was the presence of a number of deaf people, to whom the three papers included in this number of the VOLTA REVIEW were interpreted in signs by Mr. Ray and Dr. E. A. Fay, Editor of the *Annals*. The Rev. E. Clayton Wyand, the deaf pastor of a congregation of the deaf in Boston, joined in the discussion, orally. He found little to object to in any of the papers. He did not oppose oral teaching in any way, but believed signs were often an actual aid to speech and lip-reading, and was sure that their use in public assemblies aided in the mental development of the deaf.

Dr. Fay stated briefly and lucidly the position of "oralists" and the advocates of the "combined" method, for the benefit of the "lay" part of the audience.

The sessions of the Department of Special Education closed with a business meeting, at which the following officers were elected:

President, Dr. Frank J. Bruner, Chicago, Ill.; Vice-President, Miss Elizabeth E. Farrell, New York City; Secretary, Dr. E. A. Fay, Washington, D. C.

ORALISM IN ORAL SCHOOLS*

SPEECH-TEACHING AT ITS BIRTHPLACE—ITS PRESENT IMPERFECTIONS, THEIR CAUSE AND THEIR CURE—PRACTICAL SUGGESTIONS

BY HARRIS TAYLOR

Superintendent of the Institution for the Improved Instruction of Deaf-Mutes, New York City

METHODS of instructing the deaf may be broadly classified as oral, silent, and mixed. The oral method employs speech and speech-reading as means of instruction, the silent method uses finger-spelling and the sign language, and the mixed method appropriates whatever it desires from the oral and the silent method. Writing has a prominent place in each of these methods. Schools for the deaf may be designated, according to their methods, as oral, silent, and mixed. Ignoring one small silent school, we may say that approximately four-fifths of the deaf are educated in mixed schools and one-fifth in oral schools. In mixed schools fully one-half of the pupils are taught wholly or chiefly by the oral method, and, of the remainder, three-fourths are taught by the silent method.

The Growth of Oralism

I have the honor to be at the head of the oldest oral school in America, and I am a year or two older than the school I represent. Today there are more than eighty oral schools in the United States, and the number is increasing every year. In 1892 only twenty per cent of the children in our schools for the deaf were taught by the oral method; today more than sixty per cent are taught orally. When the schools for the deaf reopen next fall most of the new pupils will be placed in oral classes.

These figures indicate a growing recognition of the superiority of the oral method. Oral teachers in mixed schools have to contend against unfavorable conditions not found in schools where only the oral method exists. I have paved the way for announcing my belief that the best schools for the deaf are oral schools, and now I wish to tell you wherein oral schools are not so good as they should be.

A large number of pupils in oral schools are able to converse readily with nearly every person they meet. A larger number who use speech and speech-reading freely with their intimate acquaintances find more or less difficulty in understanding strangers. Others, while materially benefited by oral instruction, are, in all kindness, very poor lip-readers.

Cause of Poor Speech-Reading

An oral school should not be judged by the few graduates it sends to high schools and colleges, but by what it does for the rank and file of its pupils. Candor compels me to say that many of our pupils fall sadly short of the desired proficiency in reading the lips. Children vary; as speech-readers some have ten talents and some five talents, but something is wrong when a child hides one talent in a napkin. Making very few exceptions on account of imbecility and partial or total blindness, I believe that inability to read the lips is due to inferior teaching or unfortunate conditions rather than to any inherent defect of the child.

Many teachers in communicating with poor lip-readers resort to an unnecessary amount of writing. It very often happens that the pupils who require the most practice in lip-reading are afforded the fewest opportunities for becoming proficient. The less writing the teacher does, the less writing she will find necessary. The cure for poor lip-reading is more lip-reading. The attitude of the

*A paper read July 8, 1910, before the Department of Special Education of the National Educational Association, at its forty-eighth annual meeting, held in Boston. For Mr. Taylor's discussion of oralism in combined (or "mixed") schools, see THE REVIEW for October, 1909, pp. 332 et seq.

teacher often insures failure. If she shows that she does not expect pupils to understand, they will rarely disappoint her.

The Teacher's Part

Poor lip-reading is often due to lack of concentration. Some teachers rarely have to repeat, while other teachers have to tell nearly everything two or three times before all the pupils understand. The difference is in the teachers rather than in the pupils. When the teacher commands strict attention, she has to repeat very little; when the teacher does not command strict attention, everything has to be told over and over.

The teacher is constantly tempted to shield the pupil by shaping her language in the way most easily understood. This gives a stereotyped phraseology which seriously retards the child's progress when thrown with persons who use the language of the hearing world. Governed by the same motive, teachers occasionally seem afraid to give the child more than a few words at a time. There should be less simple question-and-answer work and more extended discourse on the part of both teachers and pupils.

Exaggerated motions of the lips, jaw, and facial muscles give the child an erroneous idea of the movements necessary to produce correct articulation. It is not desirable to speak so slowly that each consonant stands by itself and each vowel is resolved into a diphthong. Distinct speech, without "mouthing," and as rapidly as in ordinary conversation is what the deaf child should expect from the teacher. In addition to this, the child should have all possible practise in reading the lips of those who speak with less accuracy.

Drill as an Adjunct to Practise

Prof. Giulio Ferreri says, "Speech-reading is not to be taught, but only to be practised." Practise in speech-reading should begin as early as possible, and the more practise the better; but under the most favorable circumstances this practise does not meet the conditions of some, while others labor under circumstances that are very unfavorable. Systematic drill is often of material advantage, because it enables the pupil to obtain in the most economical way the particular kind of practise he needs. This drill should be very largely of syllabic combinations utilized in the formation of words, phrases, and sentences.

Persons unfamiliar with the deaf cannot always understand the monotonous speech of children who have never heard. There are times when even a teacher has difficulty in understanding pupils whom she has never taught. Where there is no accent, no inflection, no emphasis, nothing except a dull, slow movement of syllables, the greatest accuracy of positions is likely to result in a monotony far from pleasing. This same movement without some accuracy of position is intelligible to a few teachers who can understand any noise produced by a deaf child, but it is not always intelligible to the rest of the world.

Monotony vs. Inaccuracy

These conditions are most likely to exist in schools where the element method is used—where the child learns to pronounce each sound or element separately, and later combines these sounds in a way not always musical to the ear.

The condition is different where the word method is used. There we find more continuity and greater flexibility. The flow of sounds is more rapid, more regular, and with larger freedom. The trouble is, we also find a higher percentage of inaccuracies. Considering the worst cases, in the "element" school we hear most difficult English and in the "word" school we hear what appears to be more fluent speech, but in a foreign tongue.

A few advocates of the word method take the position that the child will speak more accurately as he grows older, just as the hearing child does. Some even go so far as to say, "Treat the deaf child exactly as if he could hear." To a limited extent this is good advice; but we should never forget a point of difference between the normal and the deaf

child—one can hear and the other cannot. When a normal child's attention is called to his errors of articulation, his hearing will usually enable him to correct them; but the deaf child, who can be guided only by memory of position, is not going to improve to the same extent. A few prominent positions he can correct from observing other persons, but many positions are partially hidden from view, and he will necessarily take these positions as he first learned them or else make sounds at random.

Vocal Control before Speech

In the beginning the deaf child should be given a course of vocal gymnastics to enable him to control his tongue, lips, and other vocal organs. When the desired control is obtained the child is ready for the elements of speech. Each of these should be made with the greatest possible accuracy. Combination of elements should begin immediately after the second elementary sound has been acquired. As soon as the first vowel is learned the combinations should be of a syllabic nature. A few elementary sounds can possibly be learned more readily in combination, but here the correct position should be definitely fixed by varying the combinations until the desired element is clearly differentiated.

Dr. Alexander Graham Bell has frequently told us that a single indefinite vowel is sufficient for intelligible speech, provided the consonants are formed correctly. Thus us tru, but unfurtunutlu ur pupuls du nut ulwus furm thur cunsununts curructlu. Sir Morell Mackenzie says, " 'Take care of the vowels and the consonants will take care of themselves' is a maxim that is scarcely an exaggeration." Id ith bewy dwoo dad koot wowels are ob imbordanth. If the deaf always formed their consonants accurately we might ignore the vowels; if they used perfect vowels we could be lax with the consonants; but, since neither is the case, the necessity for careful training in both consonants and vowels is apparent to the teacher of articulation.

Neglect of Accent and Emphasis

Accent and emphasis do not receive deserved attention early enough to be used to the greatest advantage. It is not desirable that all elements should have equal force—some should be slurred—but it is desirable that the important elements should be emphasized. It matters very little whether I say *dēsirable, dêsirable, dŭsirable, dĭsirable, desirāble, desirĭble, desirăble,* or *desirŭble.* The importance lies in making the *i* long and in accenting the proper syllable. With intelligent grouping of words in the sentence and with correct accent and emphasis, the speech of the deaf can be improved many fold.

The teacher should endeavor to learn the normal pitch of each child's voice. By doing this she is better prepared to take steps to prevent the child from pitching his voice ruinously high or low.

Above all, we should strive to develop to the utmost the head resonances. Herein, I believe, lies the greatest improvement of the voice in the future.

Deaf children frequently use unnecessary muscles while speaking. In many cases, especially during the earlier years, the teacher should cultivate repose in the child and show him that it is not necessary to speak with his whole body. Much practice in easy, familiar words or nonsensical combinations will often prove beneficial. The voices of many young children are very weak, and shouting or loudness is responsible for much of the disastrous constriction of the muscles of the throat and back of the mouth.

Development of "Muscular Sense"

Every oral teacher should strive to develop muscular sense in the vocal organs. "It is this muscular sense which, in the case of those of our pupils who have no speech when they come to us, guides the movements of their vocal apparatus while imitating the sounds of speech, and, as they depend upon it entirely and use it continually, it becomes very acute in a very short time" (D. Greene). With

this muscular sense the teacher has only to imitate an incorrect sound in order to know in what way the articulation is faulty. Without this muscular sense the teacher will know that something is wrong, but she may not have the faintest idea of the nature of the defect. When you don't know what to do in articulation teaching, do nothing. We want a watch to keep good time, but we are not likely to improve the condition of the watch by using a monkey-wrench to repair it in the dark.

Experiments are necessary if we hope to progress, but we may think we are experimenting when we are only tinkering. Before experimenting with a deaf child, we should know definitely what results we are trying to obtain and whether or not the child can be injured by the test. We cannot follow the rule to "try it first on the dog," but we can usually try it first on ourselves.

The Ultimate Goal in Speech-Teaching

Contempt for details is responsible for many faults of oral teaching. Other faults occasionally are due to lack of imagination. A certain teacher was trained by So-and-So, So-and-So being a star of the first magnitude in the oral heavens. This teacher never questions the reason, but does exactly what So-and-So told her to do under certain circumstances. If satisfactory, the results are a vindication of the expedient; if unsatisfactory, the child is stupid and should be put in a lower class.

While hard-working and conscientious, a number of teachers seem to think they are accomplishing about all that can be expected in oral teaching. Oralism is a blessing to the deaf, and those teachers deserve greater reward than they shall ever receive on this earth; but, after all, they "see through a glass darkly." When every deaf child in America can understand what a person says from his shadow on the wall and can be understood by every English-speaking visitor, then and not until then may we fold our hands and with complacency say we have done all that can be desired of an oral school.

COMMENT ON MR. TAYLOR'S PAPER*

BY SARAH JORDAN MONRO, Horace Mann School, Boston, Mass.

THE first point considered by the writer of "Oralism in Oral Schools" is that of *speech-reading*. He says, "I believe that inability to read the lips is due to inferior teaching or unfortunate conditions."

I agree fully with the writer that this is the case—*inferior teaching or unfortunate conditions*. A child of average ability, or even one somewhat below the normal, can become a good speech-reader if he is taught by a *good method*, by a teacher who applies it *intelligently*, and is given *unlimited practice*.

"Many teachers," says the writer, "resort to an unnecessary amount of writing." I would avoid everything that is unnecessary, for the time for work with deaf children is all too short, but in class-teaching the danger of conveying wrong impressions through speech, unaided by writing, is so serious that I would not advise less writing. I would require a pupil to try over and over again, and then let him see in writing that which he has failed to decipher from the lips.

Pupils differ in their attitude toward speech-reading; some are too distrustful of their ability to know, and, while understanding a part of what is said, will not venture to repeat the remark. For such as these the teacher's writing gives confidence. It also shows them the slight differences that exist in the elements of speech.

"Practice in speech-reading should be-

* Paper opening the discussion of the preceding paper, "Oralism in Oral Schools." Read at the same session of the N. E. A., by Mrs. Monro, teacher of speech and voice training in the Horace Mann School.

gin as early as possible," says the writer. It *does* begin with the first lesson in speech, for while the teacher is showing the child how to control and guide his tongue she is teaching the reading of speech.

Value of Concentration

The point that *concentration* is necessary is well taken. Concentration is at the foundation of good speech-reading, for nothing in this nor in any line of attainment can be accomplished without fixing thought upon it. A skillful reader of speech gets the statement as a whole. It flashes out upon him from the face and mouth of the speaker much as the words of an electric sign flash out before our eyes. We see it suddenly and as a whole.

Rapidity on the part of the speaker is *very* desirable from the first, even if only one or two elements be spoken.

What the writer has said about exaggeration is excellent. Exaggeration is one of the greatest evils in speech, for, as the word indicates, it takes us, "ex," away from, the normal, which it is our aim to reach.

The part of the paper which has the greatest interest for me is that in which the writer refers to the matter of *monotonous speech*. Let us consider for a moment what constitutes agreeable speech in a hearing person.

Good speech must have a clear, pure tone; not too high nor too low in pitch; not too loud nor yet too soft to be easily heard; distinct enunciation; proper accent; rhythmic fluency, which includes phrasing and change of pitch; also expression, which has to do with inflection and quality of tone. Behind all this is the controlling power, an active mind, sitting, as it were, on its throne, dominating all.

Expression

How does the speech of a deaf child differ from this I have described? Most of all, it lacks change of pitch and expression. Think of the change of pitch as we make the statement, "It is raining." If we are indifferent we say, "It is raining" (illustrate); if surprised, we say, "It is raining" (illustrate); if disappointed, we express it in still another way. The difference in inflection comes from our mental attitude. The best teachers of the deaf today are able to get distinct enunciation, an agreeable quality of tone, in most cases a good conversational pitch, proper accent, and a certain kind of fluency; but the question least studied is how to give to the speech of the deaf that variation which thought and emotion impart to the speech of hearing persons.

Psychologists tell us that in the act of thinking the mind proceeds from idea to idea by a series of pulsations which are rhythmic. We rest upon one idea, then leap to another, according to the association of ideas, and this spontaneously causes a leap in the voice. If these changes in pitch, together with tone-color, depend upon the way we think and the degree of vividness in thinking, why is hearing absolutely necessary to gain these points?

It is said by a teacher who trains the voices of hearing persons that the reason those who are deaf do not vary the pitch is that they have been taught objectively and the mind is in a mechanical attitude. The making of tone with them is not the spontaneous expression of the action of their minds. Just think of the time and money spent by persons who hear to improve the quality of their voices and to correct defects of speech! It is not right for us as teachers to neglect to give to the deaf the very *best training* in this direction, and a *great deal* of it.

DAY SCHOOLS AND INSTITUTIONAL*

RELATIVE COST AND EFFICIENCY OF THE TWO TYPES OF EDUCATIONAL CENTERS FOR THE DEAF—PRESENT STATUS AND FUTURE TREND

BY MABEL ELLERY ADAMS, A. B., Horace Mann School, Boston

I HAVE narrowed my field of discussion, restricting it to day schools and institutions which I have myself visited recently in ten States; but, as this territory contains fifty per cent of the population of the United States, conditions therein may be considered fairly typical of all thickly settled districts.

The matter of cost presents itself in two relations: the comparative cost of educating the deaf and the hearing, and of educating the deaf in day schools and in boarding institutions.

Upon the first comparison we have scant time to linger. It must be freely admitted that the education of the deaf is necessarily more expensive than the education of the hearing; the classes should be only one-fifth as large, the salaries of teachers tend to be higher, and the proportionate cost of maintenance of plant is always larger in small schools. For example, in the State of Massachusetts, which has one large day school and sends pupils to several endowed institutions, the *per capita* cost is $191.76 in the day school and ranges from $243.77 to $400 in the institutions, while the cost of educating normal children throughout the State is about $31.50.

The second comparison—between day schools and institutions—is already partly indicated. It is obvious that a boarding school must cost more than a day school, since, in addition to all educational expenses, which theoretically might be identical, the boarding school must furnish board, service, and supervision for out-of-school hours. The first cost of plant, too, is greater for the institution, owing to the greater complexity of needs in an establishment where pupils are to live as well as learn. Day school accommodations, whether in classes among hearing children or in buildings devoted exclusively to the deaf, can be provided for from one-tenth to one-fifth of the cost of a thoroughly adequate institution.

This higher cost of education in institutions is of course necessary wherever a scattered population renders day schools impracticable; but "impracticable" is a word which has changed its connotation many times in the education of the deaf, and recent improved traveling facilities have narrowed the territory from which the institutions must draw, while they have correspondingly broadened that of the day schools, showing conclusively the feasibility of free transportation of deaf children considerable distances daily for their schooling while their parents continue to support them in the ordinary way. As the cost of transportation usually does not approach the cost of maintenance in an institution, the future is likely to show a lively demand for day schools from thrifty taxpayers unless the institutions can give convincing proof of their superior efficiency; and it is this question of the present relative efficiency of institutions and day schools which is my main theme today.

No Monopoly of Good

Taken as a whole, when considered from the point of view of one accustomed to much visiting of public schools for normal pupils, both kinds of schools seemed to be doing highly efficient work on the academic side; but, with two exceptions, I found no monopoly of good or bad in day schools, or in institutions, or under oral or combined methods — no marked pre-eminence of excellence, of depth of educational degradation, which could fairly be attributed to institution

*A paper read July 6, 1910, before the Department of Special Education of the National Educational Association, at its forty-eighth annual convention, held in Boston.

or day-school life, to "combined" or oral method. The two exceptions were these: First, the standard of attainment, grade for grade, was much higher in two oral institutions than it was anywhere else; and, second, the lip-reading and the voluntary use of speech in the day schools were unmistakably better than in the combined institutions. This characteristic of the day schools was particularly marked in the case of semi-mutes—pupils possessing normal language but no hearing. In the day schools I found many such pupils able to carry on an extended conversation with a stranger and to do public-school grade-work through lip-reading, but in the combined institutions their lip-reading was often inferior to that of the congenitally deaf, and they would speak only when urged.

Mental Development About Equal

Aside from these exceptions, however, I could see no startling differences. There were some badly graded day classes struggling along under adverse circumstances and making small progress; but there were just as badly graded classes, making every whit as little progress in institutions. I found a few brilliant pupils with an extraordinary use of language, and large numbers of "medium bright" ones, plodding along the well-worn, weary paths, in both kinds of schools; but the most careful comparison of their written work failed to bring out any remarkable difference in their mental achievements which might be attributed to their different kinds of life or the method employed. To be sure, in regions where relations are still a little strained, I heard a different story: day school and institution alike asserted the other's "output" to show a lamentable waste of years. Yet in those very day schools and institutions I saw the average child doing exceedingly creditable work along orthodox lines, with not much to choose, except in the matter of lip-reading and voluntary speech, as already mentioned.

Of course the foregoing is not a comparison between the results of the oral and the "combined" method, because the better half or two-thirds of the pupils in most "combined" institutions are taught by the oral method, at least in their early years, with a strictness that out-orals the oralists in the purity of its oralism, while the poorer portion, on the other hand, is taught by manual methods, with little or no admixture of oralism. It is obvious that the only chance for comparison of methods is between these manually taught pupils and a like proportion of the poorer pupils in the oral schools. This comparison I tried to make, a good deal handicapped, naturally, by ignorance of signs and spelling. "Combined" teachers had assured me that results under manual methods were immeasurably better; that slow pupils, unhampered by the difficulties of articulation and lip-reading, could make vastly better progress than those so trammeled, and I honestly expected to prove the truth of these assurances. I had always believed that signs and the manual alphabet would be of great help with slow children, and I looked to find in those manual classes the realization of my dream—but I didn't! They failed to make good! Those just below average were doing about as well as the same kind of orally taught pupils, minus the lip-reading and speech, and the very poor ones were showing just as meager, discouraging, disheartening results as were their mental equals in the day schools. In both places, too, I saw the actually feeble-minded, who have no rightful place among the "normal" deaf, and can be nothing but an injury and a menace to them.

As for the standard of academic attainment, the course of study is usually somewhat higher in the institutions than in the day schools, sometimes decidedly higher; but, on the other hand, the day schools tend to send more graduates to secondary schools for further education.

Modernity of Methods

But while the course of study is more ambitious in the institutions, the methods—and I now use the word *method* in the ordinary pedagogical sense—the

methods employed in the day schools tend to conform more closely to modern educational ideals, while in some of the institutions there is a clinging to curious mechanical devices and a reliance on verbal memorizing not in accord with modern educational canons. Grammatical feats, intricate to dizziness, and rather spiritless recitations of memorized extracts from text-books seemed little calculated to rouse mental alertness or intellectual enthusiasm. It was not a matter of poor teaching—much of the teaching was admirable—but rather one of inheritance, it seemed to me. Our institutions were not only the offspring of the English charity schools, but also the pioneers in teaching English to the deaf. From the charity schools they inherit the long, monotonous days, filled with much indoor employment and little physical training or out-of-door life; the programs which send pupils to the schoolrooms tired with hours of manual labor, and the tedious evening study-period in close, ill-lighted rooms, when mind and body are alike fatigued; and from the pioneer days they come by the tendency to look upon language as a "mystery" attainable only through initiation by symbols and formulas. The monotony of institution life became apparent to me through a study of the daily journals. I read them carefully everywhere with a view to discovering how far they reflected the characteristics of their social environment. In the institutions I found that, with a change of names, any journal might have belonged in any one of five States, while in the poorest day school—and it was pretty poor—the poorest journal indicated the nature of the fruit crop, the character of the leading industries, and the number of railroads in the place. And the mysterious character of some of the language-teaching was brought home to me by my own difficulty in understanding some of the mechanical devices with which fifth and sixth year children were struggling. Too much knowledge of structure and too little expression of thought seemed to be the trouble.

But if these legacies from the past are outgrown, our institutions possess another of which they may well be proud, for it is from the same English charity schools that they inherited their trade-teaching which our public schools are but just beginning to imitate. From the very first they have held up to their pupils an ideal of self-support and dignified social service, and have sent them out trained to take their places in the industrial world and to earn a living without asking allowance for their defects. So far the day schools, except in isolated instances, have had nothing like this to offer; like the public schools with which they are affiliated, they are still in the manual-training stage. In spite of this lack of specific vocational training, nevertheless, the past pupils of the older and larger day schools show no marked inferiority in economic efficiency, when contrasted either with their hearing brothers and sisters of like education or with the past pupils of institutions, as a recent inquiry has shown. This fact does not detract at all from the value of the vocational training of the institutions; it only means that in this day of rapid industrial change manual facility and dexterity, however gained, are valuable and have a market value.

It is not alone in the industrial world that rapid changes are occurring; we are in a transition stage socially and educationally as well; old processes and methods are dropping out of sight and new ones are on trial. Argument about the past, or even the present, is of little worth. So, instead of a formal summing up and balancing of what I have been saying in regard to day schools and institutions, I wish to bring this discussion to a close by a look forward in the direction toward which present movements seem to tend.

What is the Trend?

It is becoming increasingly difficult to earn a living. The deaf, as well as the hearing, must augment their efficiency in order to live at all, and the very best gift which a public school can give its pupils is a definite vocational training. I look forward to a time when every deaf pupil,

boy or girl, shall receive such a vocational training—a training more special than the day schools and more general than the institutions now give—a training which shall add to an early course in the use of tools and simple construction, a fundamental knowledge of one or more trade processes and enough elementary science to enable the deaf to compete in many employments now closed to them.

I look forward, too, to a time when day schools shall be many, institutions smaller and broken up into family groups; when every large city shall do what Milwaukee alone now does—provide for the education of the deaf to the door of the university; when every deaf child with natural language shall be able to attend school near his own home; when improved methods and programs in all schools shall make learning less fatiguing; when all deaf children shall be instructed through language and most of them through speech; and, above all, I look forward to a time when the last faint echo of the strife of methods shall have died away and left a peace wherein teacher or pupil can make an explanatory gesture without reproach—a peace wherein the right of the deaf of mature years to communicate by any means they choose shall never be questioned.

OUR OWN COUNTRY

I

THE NEW NATIONAL GLACIER PARK

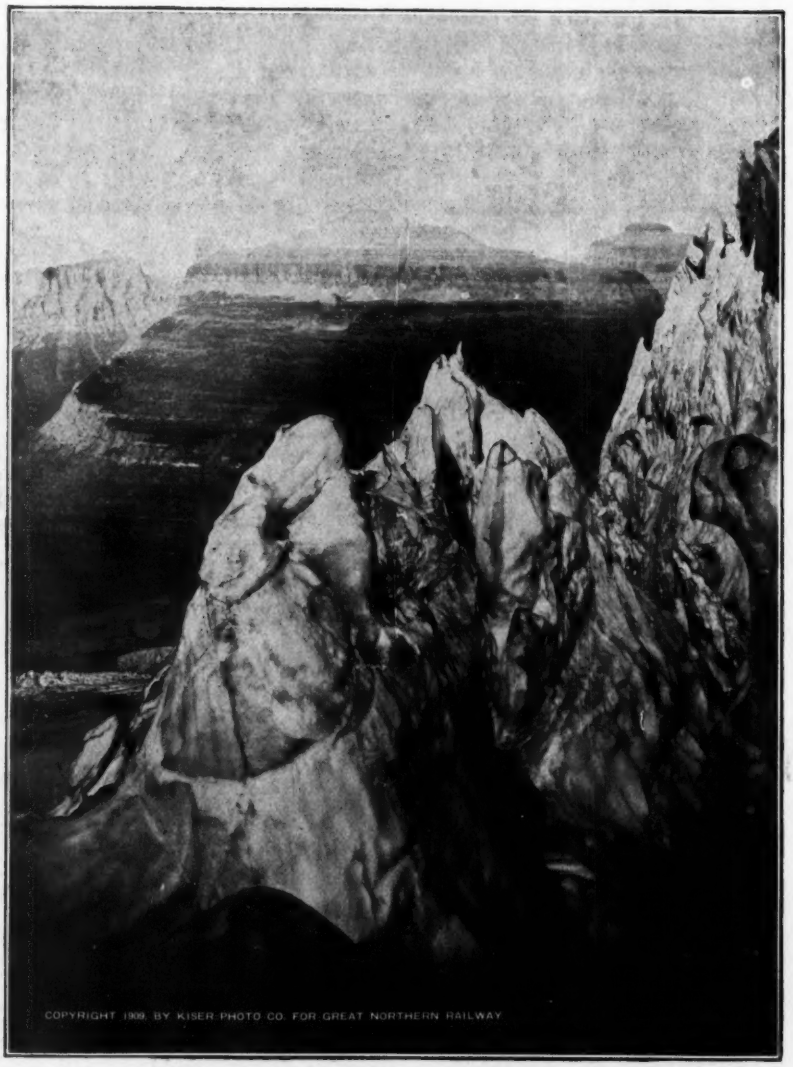
AMONG the snowy Sierras of our Western country there is a place where the great Continental Divide slopes not in two directions only, but in three—a mountainous region of glaciers, waterfalls, and abysmal valleys, which sends its streams alike to the bleak shores of Hudson's Bay, the sunny coasts of the Pacific, or the warm stream of the Mexican Gulf. Here Congress has just set aside 1,400 square miles as a new playground for the people, to be known as National Glacier Park, the second largest reservation of its kind in the country. This region is located in northwest Montana. On the north it crowds the international boundary line; on the east it touches the habitations of human beings as savage as itself, the Blackfoot Reservation; its western boundary, the Flathead River, provides another reminiscence of the aborigines who were once its masters, while on the south it is connected with civilization by the Great Northern Railway.

The park includes some 60 glaciers and 250 lakes; a confusion of mountain peaks, shouldering their way 6,000 to 10,000 feet toward the sky; magnificent waterfalls, gorges, and torrents; while over all there is a mantling forest of beautiful pine, spruce, and cedar trees.

The region is said to abound in game to an extent hardly to be believed. Old guides estimate that it contains no less than 10,000 mountain goats, 2,500 moose, 200 elk, 700 mountain sheep, and possibly 1,000 to 1,500 grizzlies, as well as 2,500 or 3,000 black bears. One party of hunters, working from one camp as their headquarters, caught seven grizzlies and three black bears in six weeks. Another trapper saw no less than five grizzlies on one summer day.

And, with all this untamed beauty and grandeur, abounding as it does in wild life, the National Glacier Park is but two hours from the main line of a great transcontinental railroad!

Last year F. H. Kiser, of Portland, Ore., spent six months in this region engaged in taking photographs of the National Glacier Park. Through the courtesy of the Great Northern Railway, which sent Mr. Kiser upon this expedition, it is possible to represent some of these photographs on the following pages.



CREVASSE IN THE BLACKFOOT GLACIER

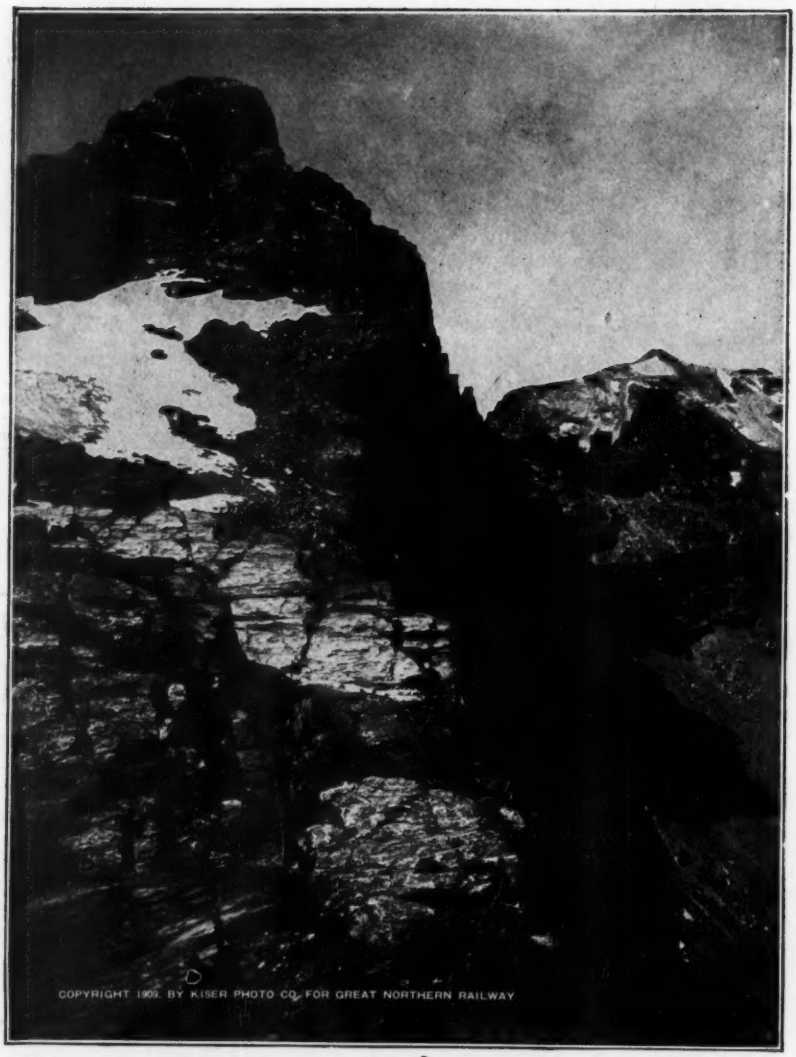
Although most citizens of this country are unaware of the fact that glaciers exist in the United States, there are no less than 60 in this one park, some of them covering 500 square miles. William T. Hornaday, the naturalist, says: "I had seen the Rocky Mountains and the Sierras before, but, as truly as I live, never elsewhere have I seen so splendid a combination of towering peaks and precipices, glacial lakes, and actual glaciers packed into one small area as is contained in the eastern half of the ten-mile semi-circle around the head of Lake McDonald. It is worth any man's trip across the continent and back to spend even one short week."

TRIPLE DIVIDE MOUNTAIN

From one spot, you can look down and see where the waters flow three ways, to Hudson Bay, to the Gulf, and to the Pacific. The little streams can be traced away back up the sides of the mountains, where they dwindle away to nothing but the drip, drip, drip from the rocks.

SUNSET ON LAKE McDONALD

This and Lake St. Mary are the two largest bodies of water in Glacier Park. Most of the lakes are fed from the glacial streams, with the result that their waters are ice-cold at all seasons of the year. In area they range from ten miles to a few hundred feet in extent.



THE HOME OF THE WILD MOUNTAIN GOAT

MISS FULLER'S RETIREMENT

A CAREER OF FORTY YEARS AS PRINCIPAL OF OUR FIRST DAY-SCHOOL FOR THE DEAF—A SPEECH-TEACHER WHO WORKED IN LOVE, AND WHOSE REWARD IS LOVE

BY MABEL ELLERY ADAMS, A. M., Corresponding Editor of THE VOLTA REVIEW

ONCE a mother took her baby-boy, who did not seem to be learning to talk as he should, to a famous aurist. He examined and pronounced judgment. "The boy is deaf. Take him to Miss Fuller."

The mother went to Miss Fuller that very day, in the old Horace Mann School-house in Boston. The building was old and dark and dingy, and through the thin walls of the office sounded the voices of the pupils, far harsher in those days than now, and appallingly unnatural to unaccustomed ears.

"I sat there and waited and listened," that mother often says, "until it seemed to me as if my heart would stop beating; and then someone came in, and I looked up and saw a woman with a face like a benediction, and after that nothing was ever so hard again."

The woman with the "face like a benediction" was Miss Sarah Fuller, who, on August 31, 1910, through the working of the "seventy-year retirement rule" of the Boston School Committee, became Principal Emeritus of the Horace Mann School in Boston, after forty-one years of service as principal.

When, in 1869, the Boston School Committee decided to open a day-school for the deaf, they selected Miss Sarah Fuller, of Newton, a teacher in the Bowditch School for Girls, to inaugurate the venture. Miss Fuller was then thirty-three, with fourteen years of successful experience in teaching normal children behind her. Ancestry, education, and temperament all combined to make her the right woman in the right place; there had been Fullers in public life in the Old Bay State ever since the original Thomas landed in 1636; her education in the model school attached to the first normal school founded in Massachusetts, and in the English and Classical School, conducted by those two famous educators, Nathaniel F. Allen and "Father" Pierce, had given her a mental training unusual for a girl of that period; and the scholarly attitude of mind, the keen desire for knowledge, and the conscientious devotion of leisure to lessons in music and art and history and science, in the transcendentalist Boston of her young womanhood, had given to the Sarah Fuller who took up the work with the deaf the culture and breadth of view so much to be desired in all special work.

MISS SARAH FULLER

The School Committee sent her to the newly founded Clarke School at Northampton to learn what she could from the pioneer work of Miss Harriet B. Rogers, and in November, 1869, the actual school began with nine pupils. From that small

beginning, through a process of steady growth, has resulted the present school, housed in a $90,000 building, which is all too small for its needs.

It was a *public day-school* which the School Committee gave into Miss Fuller's keeping, and, sleeping or waking, the day-school idea has been her dominant thought. Fresh from experience with normal children, doubts and qualms as to the propriety and ethics of allowing deaf children to associate habitually with their own families never troubled her; she only thought of how to make them more a part of their home-life.

Every change in the curriculum, every reaching out after new educational aids, has been an effort to bring the school into alignment with the elementary schools of the city, and to make the children feel that only their deafness differentiated them from their hearing brothers and sisters. To some minds this minimizing of differences can go too far, but as an ideal to be lived up to, in the days when the "charity" of the State sent the "deaf and dumb" to "asylums," it served its purpose well.

One subject there was, of course, which even Miss Fuller's courageous optimism could not take over from the curriculum of the public schools—in speech the early oral teachers had to hew their own way.

At Miss Fuller's instance the School Committee invited Dr. Alexander Graham Bell to come to Boston and teach his father's system of Visible Speech to the teachers of the Horace Mann School, and on the scientific foundation he laid for them and many other teachers, present methods of speech-teaching have been evolved.

In the early days, before administrative work claimed all her time, Miss Fuller did much speech-teaching herself; and that she did it well the speech of the gray-haired men and women who attended her farewell reception on June 25 bore abundant evidence. The study and research of later teachers have borne many valuable results, but the plain, fluent, intelligible speech of those early pupils may well remain the despair of more formally trained teachers.

To that same farewell reception, from far and near, came every past pupil who could by any effort get there, and with them their fathers and mothers—and she knew them all! So proud they were of that, as they talked to the teachers.

"She knew me in a minute, after twenty years, and she hasn't changed a bit. We all love her so."

"We all love her so"—that is the keystone to the structure she has built. More than to education or culture or method Miss Fuller owes her success to love. No wonder her face is like a benediction.

Miss Ella Celynda Jordan, who succeeds Miss Sarah Fuller as Principal of the Horace Mann School for the Deaf in Boston, is Miss Fuller's niece, and has been associated with her as assistant principal since 1872.

Teachers and alumni alike express great satisfaction at the appointment of Miss Jordan both because it carries with it the assurance that the work of the school will be continued along the same lines, and because Miss Jordan is herself greatly beloved and admired by all who are privileged to know her.

PESSIMISM OF PARENTS AND TEACHERS

ITS EFFECT UPON THE DEAF CHILD—"A RETARDED DEVELOPMENT, ATTRIBUTED TO DEAFNESS INSTEAD OF TO A MISCONCEPTION OF THE CONSEQUENCES OF DEAFNESS"

BY S. G. DAVIDSON, A. M., Corresponding Editor of THE VOLTA REVIEW

Optimism is the faith that leads to achievement. Nothing can be done without hope.—*Helen Keller.*

SOME time ago I was dining with a business man, the father of a deaf boy who will shortly graduate from the school he is attending. It was not long before he came round to the question:

"What do you think I should do with X—— when he leaves school?"

What to Do with the Deaf Boy

"Supposing he could hear, what would you do with him?" I asked.

"I should take him into the office to learn the business, and if he made good, he would some day take my place," was the answer.

"Why not do as much for X——?" I asked.

"Because he is deaf," with a look indicative of his belief in the absurdity of the question; "a deaf man could not carry on the business."

This was my opening, and I proceeded to demonstrate, by argument and example, that he was altogether wrong in his estimate of the disadvantage under which his son labored on account of his deafness. I told him of a deaf man who had succeeded his father in business and had conducted it far more successfully; of others beginning for themselves who had made their way in many lines of endeavor. I instanced deaf merchants, lawyers, bankers, railroad men, manufacturers, painters, sculptors, architects, authors, editors, publishers, inventors, scientists. I showed him that there is hardly an occupation for which there cannot be produced at least one example to prove that deafness is not a bar to success in it. As I progressed, the father's face lighted up, his eye kindled, and he frequently looked across the table at his son, as if studying his possibilities from a new point of view.

The upshot of the interview was that, although evidently not convinced, he said he would take him into his office and see what he could do there. I acknowledged that the experiment might prove a failure, but insisted that, if so, it would not be because of deafness, but from one or a combination of the reasons that may cause any man to fail—lack of character, of application, or of natural aptitude for business. And I told him that, as he sincerely wished for his son's success, he should rid his mind of any doubts based on the fact of his deafness. He should fix no limitations, make no allowances on account of it, but should expect and demand of him as much and allow him the same opportunities as he would in the case of any other young man entering the business.

Exaggerating a Handicap

I do not know how large a proportion of the readers of THE VOLTA REVIEW are parents of deaf children; but be the number large or small, the magazine cannot better serve the cause in which it is enlisted than by correcting the pessimistic view they so generally take of the possibilities of the deaf. If born without the sense, their children begin their existence under the shadow of doubts and doleful prognostications that darken their lives until the end; if they lose their hearing when old enough to note the effect upon their families and friends, they are even more susceptible to the baleful influence of these mistaken beliefs. The pitying looks, the sighs, the unusual allowances made them, the exemption from requirements exacted of their hearing brothers and sisters, the care with which they are guarded from imagined dangers, all com-

bine to exaggerate the seriousness of their misfortune.

Teachers as well as parents often entertain a mistaken idea of the limitations imposed by deafness, and so they demand little of their pupils, they do not hold them to the same responsibilities they would hearing children, nor push them forward as rapidly as they might. The natural result is retarded development, which is attributed to deafness instead of, as it should be, to the teacher's misconception of the consequences of deafness. They may deny and resent this charge of pessimism and insist that they always encourage their pupils to make the most of themselves and of their opportunities, but the surprise expressed at any indications of what would be considered in hearing children but ordinary intelligence and acquirements, and the manner in which moderately successful graduates are paraded as proofs of what the deaf can do and of what the schools accomplish are in themselves evidence of a disbelief in the capabilities of the deaf as a class and of the extent to which instructors fall short of their duty.

Is the Fault with the Teacher?

It should not astonish us that one out of several hundred deaf men acquires a command of English, is able to rise before an audience and speak intelligently on a subject of common interest, or succeeds in some business, art, or profession. We should rather regard it as a reflection upon us that, with the facilities at our disposal and the absolute freedom of working our will upon our pupils, we obtain such mediocre results with the great majority of them.

The sentiment is further shown by the skepticism with which many teachers regard any creditable performance by the adult deaf. Numerous instances of this might be cited from the literature of the profession and from the experiences of individuals. I recall how a man who happened to be deaf once read a paper before a teachers' meeting in a school with which he had long been connected. At the conclusion, one of those present, a recent addition to the teaching staff, said: "That was a good paper. Don't you suppose his wife [a hearing woman] wrote it for him?"

Living, at home and at school, in an atmosphere thus saturated with pessimism, the deaf child loses faith in himself, his energies are paralyzed, his development is stunted, and he is robbed of the strongest incentive to exertion—the prospect of an adequate reward for his efforts. How often I have told my pupils some story of success achieved under difficulties and pointed out its application to themselves only to have them say: "But that man could hear and I am deaf." Tell them of one deaf like themselves, and they will still express their doubts of the parallel:

"But his father was rich?"

"No, he was a poor boy."

"Was he born deaf?"

"Yes."

"Was he quite deaf?"

"Yes."

And, finally, in lieu of any other explanation of the seeming anomaly, they will say, with a skeptical shake of the head: "But he was very smart and I am stupid."

The Gospel of Hope

It is easy to imagine what must be the effect of this state of the pupil's mind upon his work and his attainments. The normal child has it impressed upon him from infancy that for him all things are possible, that there is no height to which he may not aspire, that every effort to excel will bring its due reward. In the "long, long thoughts of youth" he sees himself always in the front rank of his fellows. He has golden visions of fame, power, wealth, usefulness. With this faith in himself and the ambitions born of it, the problems his teachers need to solve in dealing with him are comparatively simple ones. His studies all have a personal application. History, biography, literature—if rightly presented—are an inspiration, not a task, for he finds in them ideals for his own attainment. Mathematics, the sciences, and the lan-

guages are tools with which he will carve his way to success. He comes to recognize that knowledge is power, he values it for the work it will enable him to do, and he is willing to strive and to deny himself to obtain it.

And the Philosophy of Despair

The deaf child is usually deprived of all these incentives to effort. Generally speaking, neither parents nor teachers believe that life holds for him aught but an almost animal existence maintained by hard labor in the least remunerative occupations. Their thought, whether expressed or merely held in mind, determines and fixes his. What lessons can he find in the lives of great men when for him there are no possibilities of greatness? Of what interest is the history of mankind and of nations to one who is to have no part in shaping the future? To what purpose should he cudgel his brains over problems and principles that he will never have occasion to apply in practice? What matters it if he cannot express himself grammatically, nor speak with clearness and elegance, nor read the lips with ease, when he must spend his days among the ignorant and the uncultured, by whom these accomplishments will be little valued? At an age when the hearing child begins to recognize his possibilities and responsibilities and to push rapidly forward by voluntary effort, the deaf child, because he then becomes conscious of the limitations that have been set for him, relaxes his efforts, lags behind, and grows increasingly difficult to instruct.

Occasionally the pupil comes under teachers who are naturally optimistic, who are governed by reason instead of blind belief, or who have a better knowledge than is usual of the accomplishments of the adult deaf. From their encouragement and their belief in him, he acquires a new confidence in himself. His ambition is awakened, his progress is accelerated, and as the time for graduation approaches he forms plans for a future of attainments and usefulness; but too often he then meets, in those who should most strongly sympathize with him and upon whom he must depend for assistance, a skepticism and unwillingness that wither his aspirations, and he resigns himself to the fate to which, not disease or accident, but those who love him best, condemn him.

The Letters of a Fond Pessimist

This article was suggested by an instance of the kind. A deaf young man of intelligence and ability, and whose attainments compare favorably with those of hearing youth of his age, is about to leave an institution. He has written to his father, a man of substance, expressing a wish to continue his education in a technical school, to prepare himself for an occupation in which he is interested and in which he feels that with proper training he can make his way. He has shown me the answer. The interest and affection his parent feels for him are evident in every line. But he calls him his "unfortunate boy;" tells him, "You could not enter college with boys who hear and make any progress;" "This is unfortunate but cannot be helped;" "The best thing is for you to come home until I can get you into something at which you can make a living without working too hard;" "You cannot go out into the world and hustle like your brothers." What this man's son will be and what he will do depend upon the strength of his belief in himself and his ability to overcome parental opposition, or on his grit in fighting his way unaided, as others under similar circumstances have done; but the lack of encouragement at such a crisis has doubtless meant failure in life to many a deaf boy.

I have in mind a case that emphasizes by contrast the mistake this father and the majority of parents of deaf children make. Some years ago there was a boy, born deaf, in the Mt. Airy school. Judged by his work there, he was of only average ability. His father was a business man, but he always found time for and took pleasure in his son's companionship. In the family no distinctions

whatever were made between him and his hearing brothers and sisters, and he associated constantly with them and other hearing children of his age. After graduation he wished to continue his education and was entered at a large private school for boys.

It was his father's wish that he should go to the university, but his own preferences were for a business career, so after three years in this school he took a course in commercial law and other business branches, then entered a large department store. He was soon trusted with the charge of a department, then sent on the road, transacting his business through speech and lip-reading. Later, he and his father started a clothing manufactory, of which he soon became the head. Some time ago he sold out the business and went abroad, making an extensive tour alone through Europe and up the Nile. Since his return, he has gone back into the store where he began, with the purpose of mastering every department of the business.

How a Right Mental Attitude Works

This young man occasionally calls on me, and there is no one whose company I more thoroughly enjoy. He is optimism personified. His deafness presents no imaginary difficulties, and the few real ones are met with an assurance and cheerfulness that cause them to shrink into insignificance. He has read much and with discretion, and can talk intelligently upon as wide a range of subjects as the average professional man with university training, while his travels and his business associations have given him the poise of a man of the world and a ready wit that enables him to hold his own in any discussion that may arise. What he is and what he has done he owes to his own efforts, but would these have been made had he been subjected to the depressing influences that surround the average deaf child?

BRITISH TEACHERS' EXAMINATION

THE following is the examination on the mechanism of speech and the method of teaching articulation, as set before candidates by the Joint Examination Board of Teachers of the Deaf in Great Britain:

1. Show by a vertical section the position of the tongue in relation to the palate in the production of the sound *sh*. How would you demonstrate this sound to the child? (20 marks.)

1*a*. Alternative. Does a deaf child necessarily need breathing exercises more than a hearing child? If so, why? (20 marks.)

2. Discuss the advisability of teaching the aspirate *h* as the first exercise in articulation. (25 marks.)

2*a*. Alternative. Discuss brifly the following two statements:

(*a*) "Articulation should be begun as early as possible."

(*b*) "Articulation is a great strain upon the child of 5 or 6." (25 marks.)

3. In what ways can the teaching of articulation be made of interest to the pupils? (15 marks.)

4. Account for the deterioration in articulation so commonly observed in advanced classes. Can this be prevented, or remedied if it has taken place, and how? (25 marks.)

5. Of the two words enter and Etna, which presents the greater difficulty in articulation teaching, and why? (15 marks.)

INTRODUCING DEAF CHILDREN TO FAMOUS NAMES

A TEACHING DEVICE WHICH TAKES ONLY FIVE TO FIFTEEN MINUTES A DAY, AND RESULTS IN INTERESTING THE PUPILS MORE IN BOOKS, NEWS, AND MUSEUMS

BY JOHN D. WRIGHT, Principal Wright Oral School, New York

CUT off as the deaf child is from the greater part of the general conversation around him, and being almost wholly dependent upon his reading and the deliberate instruction of his teachers for all his knowledge of the world's famous people, he often fails to meet in his reading and in his class instruction many names that are familiar, at least as names, to people of average education. The deaf child has so much more to accomplish in the period of his school life than the hearing child, that he rarely, if ever, gets time for as much or as wide reading as his hearing brothers and sisters, and he does not pick up from association with his elders anything like as much general information about men and things as he would if he could hear.

Casting about in my mind for some rapid means of bringing many household names of famous people to the attention of my pupils without using too much of their precious time, I hit upon a plan which in practical application has worked very well. We have all observed the fact that though some well-known matter may have escaped our knowledge for years, after our attention has been once directed to it we constantly run across fresh references and additional information concerning it.

"Quick Exposure" to the Actinic Ray

But when one exposes the mental photographic plate of a child and wishes to get a strong and lasting impression, there must be supplied a light of high actinic power, which means interest. During the first year that I tried my plan I did not feel that I could spare for it more than five minutes a day of actual school time. How then could I get my boys and girls to work with sufficient intensity to make so short a time bring forth results of any value? Ought I to blush when I say that I resorted to my knowledge of human frailties to accomplish my purpose? In the first place I made it in the nature of forbidden fruit. In the second place I appealed to the spirit of rivalry and the desire for glory and reward.

The wish to do some wholesale biographical work had long been in my mind, and years before I had set one of my best educated and most intelligent teachers the task of going through Lippincott's Biographical Dictionary and culling out from A to Z the names of people that in her estimation were familiar to every person of average education and concerning whom they knew at least one principal fact. That list, numbering 277 names, had been lying in my desk a long time.

Take Archimedes for example. Not even to have heard of him would be a disgrace to a high-school graduate. But what do you know about him? Perhaps his nationality, possibly a vaguely general idea of when he lived, and probably that he was a philosopher and had some connection with the discovery of the laws of the lever. You may have even heard that he said he could move the world if only he had a place outside of it on which to stand. Is not that the sum total of your knowledge of the gentleman? That at least was about all I attempted to plant in the minds of my pupils in the five minutes of class exercise.

The Chart and the Rules

This was my "modus operandi." I took a sheet of manila paper 40 inches by 30 and ruled on it 45 horizontal spaces, each seven-eighths of an inch wide, and 16 vertical columns of varying widths. At the head of the sheet, by

means of a set of rubber stamps, I printed "Biographical Chart of Household Names Alphabetically Arranged," in letters half an inch high. At the left side of the sheet in each of the 45 horizontal spaces I printed a famous name, also in letters half an inch high, and at the head of the vertical columns I placed titles in the following order: When born. Years ago. Answer given by. Where born. Answer given by. Parentage. Answer given by. Famous as. Answer given by. Connected with. Answer given by. Contemporaries. Answer given by. Remarks. Answer given by.

The rules of the game were as follows: The members of the class must not use in preparation for the chart work any of their study periods or any of the time when they were expected to be out of doors. If, however, they cared to do so, they could, during their leisure time in the house, look up in the Lippincott, or the Century Dictionary of Proper Names, or the Encyclopedia, or any other book, one name each day, or get the information from any person who had it to give.

During the five-minute session of the class the pupils were called upon in rotation from a set of cards containing their names, so that each had the same number of chances. Whether they were able to accept their chances and answer the questions correctly and so get their initials in the columns headed "Answer given by" depended on the success of their preparation. It is easy to see there could be no long waits or hesitation. If the answer was not promptly forthcoming, the next card was turned up and some one else got the chance. The teacher made a memorandum during the class of the accepted answers, together with the initials of the givers, and this matter was later written upon the chart either by her or by one of the pupils.

In the middle of the year and at the close a prize, consisting usually of some good book, was given to the one whose initials appeared most frequently upon the chart, and who had the highest average in the occasional reviews which were given by covering up the information columns and having the pupils write the "Famous as" and "Connected with" matter.

Results of the Teaching Device

The scheme worked so well the first year that it seemed worth while to devote fifteen minutes a day to it the second year, but that appears to be about as much tme as is required to accomplish the purpose sought. During the first year, with five minutes a day, 81 names were covered, and during the second year, with fifteen minutes a day, 138 names were studied.

As to the names to be included in the list, no two people would ever entirely agree. I doubt if I should myself make the same list two years in succession, though as time goes on I may settle down to some final selection. If enough people care for my list to lead the Editor of THE REVIEW to print it, I will gladly supply him with the names, and even the matter written in the information columns, but any teacher who thinks enough of the scheme to devote the necessary time to carry it out would probably prefer to get together his or her own material.

An alphabetical arrangement makes strange bed-fellows. The lion and the lamb lie down together. Nero and Newton, Paul and Pascal, Romulus and Roosevelt.

The effect of this brief class exercise has frequently been seen in an increased interest on the part of my pupils in their reading of books, of current publications, and in their increased enjoyment of visits to museums, art galleries, and other places of interest.

THE NEW EDITION OF "THE RAINDROP"

THE VOLTA BUREAU'S REISSUE OF A MOST POPULAR COLLECTION OF WONDER TALES AND HERO-STORIES—AN INTERESTING BOOK THAT IS NOT LITERATURE, BUT THE VESTIBULE TO LITERATURE

BY FRANK W. BOOTH, Superintendent of the Volta Bureau

IT is quite within the bounds of truth to say that no book ever published has been more popular in our schools for the deaf than the volume known as "The Raindrop." Yet, to the more recent generations of pupils the book, being out of print, has been, except in a few schools fortunate enough still to possess copies of it, little more than a name.

Published some thirty years ago, at the Western Pennsylvania School for the Deaf, it was issued at the time as a serial magazine, appearing monthly during the twelve months of the school year 1879-1880. The subject-matter of the magazine embraced the choicest selections of wonder-tales and hero-stories in literature, written in the simplest language that could be employed completely to cover and convey the thought.

Considered as literature, the work was unique, and it met on this account with more or less adverse criticism from teachers, but not so, by any means, from the pupils of the schools, for among them the magazine became immediately and universally popular, and bound volumes of it were in such demand and in such constant use that they were literally read to pieces—a fate that it is safe to say no other book has as yet thus universally met with at the hands of deaf children.

A Book Beloved of Childhood

But, as is pointed out in the preface of the new edition of the work, "the popularity of the book was by no means confined to deaf children; it was as keenly liked by their hearing brothers and sisters." Dr. Bell, in urging upon the Board the republication of the book, gave an instance of this in the case of his own children. When the book first came to his attention, he examined it and decided the language was too simple and crude, and he took it away from the children and hid it, only to discover later that they had unearthed it and read it through, and that they had even loaned it around among their playmates until it was quite in pieces, compelling him, in order to have the book in his library, to purchase another copy. It may be said that the experience of many other parents of hearing children is in direct line with that of Dr. Bell.

To the writer of this review fell the task of reading the final proofs of the new edition, and the opportunity was made use of to test the stories in reading them aloud to the two younger children of the family, respectively nine and ten years of age. There was never a time that the children were not ready and eager for the evening batch of stories, and the comments passed upon them, invariably appreciative in character, were even more of a nature to reveal the secret of the peculiar charm that the stories held for children listening to them or reading them.

One evening, for instance, it was the story of the Trojan Horse in "The Siege of Troy" that was being read, when the younger of the children, being asked, "Did you know the story?" replied, "Yes; it wasn't said this plain, though." And later he added, "I like those Greek stories. Read another, please."

An evening or two after, the older one, who, bye the bye, is a great reader of books, made the comparison direct between this and other books familiar to her. At a pause in the reading, she remarked, "I like this better than the regular fairy stories." Asked why, she replied, "Because it has nicer language,

and a nicer way of saying things, and I like it better." "You mean that you can understand it more easily?" "Yes."

How It Helps Form the Reading Habit

And undoubtedly this is the true secret of the book's popularity among children, and especially among deaf children, to meet whose peculiar needs for a primary reading or story book the work was originally prepared. Deaf children understand it more easily than they do the ordinary books, and in its use they gain, early and unconsciously, that mind attitude and mind action that we call reading—which gained, all is gained, for all else easily follows.

A vestibule does not need to be a pattern, or to be suggestive to any degree in its appointments, of the drawing-rooms, libraries, and chambers to which it gives entrance. Yet it is a useful and much-used part of the house. May not our book be conceived of likewise as performing for deaf children an analogous office of a modest, unadorned, but very useful entrance way to something else? May it not be in truth and in deed for the deaf child the vestibule to literature, which, easily entered and easily passed through, brings him thereafter to full possession and enjoyment of the rich treasures that lie stored beyond?

Those not familiar with "The Raindrop" may be interested in turning to the story taken from its pages and printed in this number of the REVIEW, and which, it may be said, was chosen for reprinting quite at random. It fairly typifies the book as a whole in the language used and the style of narration employed.

The Matter of Revision

While the book has had more or less revision in its text in this new edition, the changes made were quite entirely confined to the eliminating or the modifying of the more objectionable unidiomatic expressions or forms. That work might perhaps have been carried farther with good results, but there was the danger, always recognized as present in revising, of sacrificing to an extent, greater or less, the underlying and permeating principle of language simplicity that characterized the original "Raindrop," and that made it distinctive among books. A drastic revision would have meant only to lose "The Raindrop" and make it commonplace.

Description of the New "Volta Edition"

The book is of large octavo size, bound in cloth, with a cover design stamped in colors. The printing is done in large black type on strong, heavy paper of excellent quality. It contains 430 pages, besides about 40 full-page illustrations.

The stories number 120, and include the most familiar and quite the best that literature affords. The work is published by the Volta Bureau, Washington, D. C. Its price to members of the Association and Bureau is $2.00 per copy; to non-members, $2.50.

A TALE FROM "THE RAINDROP."

THE GIANT HANDS

LITTLE WILLIE and his mother lived together. Willie's father was dead. His mother made fancy articles to sell for money to buy food. She was sick and weak, and she could not work much. Willie went to the woods every day to get wood.

One day Willie went out to gather wood in the forest. His mother went to the village to sell some fancy articles. When she returned she was very tired. Willie was sorry for his mother. Willie said he would leave home and work for money to buy provisions, for he did not want his mother to work so hard.

His mother consented, and let him go. They sat down and ate their supper. After supper they talked a long time, and then retired. The next morning Willie got up early and ate his breakfast. He embraced his mother, said good-bye, and went away.

While he was walking along the road, a curious cloud appeared before him. Two enormous hands came from the cloud. Willie was frightened, for he did not see anybody. He stood still and gazed at the cloud. A voice from the cloud spoke to Willie. It told him the hands would always help him. Willie thanked the hands. The hands vanished, and Willie walked on.

He went a long distance, until finally he came to the edge of a precipice. He looked down the precipice and saw a muddy stream at the bottom. He did not know how to get across the stream. He sat down on the ground and wept bitterly. In a few minutes the giant hands appeared and lifted him across the stream. The hands instantly became like a cloud. Willie was very grateful, and took off his hat and bowed to the hands.

He sat on the grass. He took some bread out of his pocket and ate it. When he had finished eating he got up and looked around. He could not see any house or any person. He gathered some dry leaves and made a bed of them. He lay down on it to sleep. The giant hands appeared just then and spread themselves over him. Willie was not afraid, for he knew the good hands would protect him. He slept soundly.

The next morning he got up and left the forest. He say a huge castle. An ogress lived in the castle. Willie ran to the castle and tried to raise the knocker. It was very heavy, and he could not do it. The giant hands appeared and raised it for him.

The ogress came to the door. She looked cross, and asked him what he wanted. He asked the ogress if she wanted a servant. The ogress said yes, and told him to come in.

Willie went into the castle. The ogress told him to go to the kitchen and cook her dinner. Willie obeyed. He saw much provisions on large tables. He was troubled because he thought he was not able to do so much work, but the giant hands appeared and helped him to prepare the ogress' dinner. Willie and the hands cooked a good dinner for the ogress.

The ogress was very ungrateful, for she was not satified with the dinner. She scolded Willie and told him she would eat him. Willie became very angry, and told her she was a greedy and hateful woman. The ogress was furious. She chased Willie out of the dining-room. He ran to the kitchen. She followed him. She threw heads of cabbage and potatoes at him, but he dodged behind a pile of vegetables. The ogress almost caught Willie, but the giant hands appeared. They grasped the ogress round her waist, carried her to the window, and threw her into the sea. The ogress screamed, and then sank in the water.

Willie ran out of the house. He came to the sea. The hands followed him. They plunged into the sea. Willie jumped into the hands, and they carried him across the sea. At last he reached the shore. He got out of the hands and stood on the shore. He saw a house,

and walked up to it and rapped at the door. A kind farmer lived in the house. He opened the door and spoke to Willie.

Willie asked him if he wanted a servant, and the man said yes. He told Willie to come in. Willie went into the house and ate his breakfast with the farmer. After breakfast the farmer told Willie to go to the field and cut corn. He went to the field and began to work. In a few moments the giant hands appeared and cut a great deal of the corn very quickly.

In the evening the farmer came to the field. He was surprised to see the great amount of cut corn. The farmer's daughter was with him. She admired Willie. Willie lived with the farmer a long time, and the farmer trusted him.

One day the farmer sent Willie to the mountain for the flocks. A violent storm came up. The rivers and streams were very high, and many sheep and cattle were drowned. Willie kept the farmer's sheep on the side of the mountain until the storm was over. Then he drove the sheep down the mountain. He came to the river, but he could not cross it because it was very high. Willie was troubled. He stood on the bank and looked at the water. In an instant the giant hands appeared and spread themselves over the river, and Willie drove the sheep across the hands.

When the farmer saw Willie coming with the sheep, he was much surprised. He thought the sheep were lost in the river. He ran to meet Willie. He was very glad to see him, and he led him into the house.

The farmer's wife made a good supper for Willie. He ate his supper and went to bed. During the night a bad man set fire to the farmer's house. The farmer, his wife, and Willie ran from the house. They forgot to waken the farmer's daughter. The stairs were burned, and when she awoke she could not get down. She went to the window and called to her father. Her father and mother heard her, but they could not help her. They were nearly crazy with grief. Willie saw the girl, and he wanted to save her, because he loved her very much.

The giant hands appeared and placed themselves against the house under the window. He climbed up to the window on the fingers. He reached the window, took the girl in his arms, and descended safely. He gave the girl to her parents. They were delighted, and embraced their daughter many times. The farmer's daughter and Willie became very much attached to each other.

Willie earned much money. He bought a wagon and filled it with provisions, and started home. He had no horses to haul the wagon, so the giant hands drew it.

Willie's mother was standing at the door of their house. She saw Willie and ran to meet him. Willie waved his hat and shouted. Willie and his mother were now very happy.

Willie bought a farm and became very rich. He often visited the farmer. He married the farmer's pretty daughter, and they lived together very happily for many years.

HINTS ON HOME TRAINING

Edited by MRS. J. SCOTT ANDERSON, Swarthmore Home for Deaf Children

A DEPARTMENT TO AID THE MOTHER IN THE REARING OF HER DEAF CHILD—INQUIRIES WILL BE ANSWERED BY THE EDITOR

DANGER OF SHIRKING RESPONSIBILITY.

There are common traits found in most of us, one of which is the small value of that which we receive gratis, while another more or less fortunate peculiarity of the genus homo is adaptability. Without much effort we settle down to improve our existence under changed conditions, which a few days before would have seemed to spell "Finis" to our hopes and aspirations.

The first trait is well illustrated by our manner of regarding the common-school system of education. Living, as some of us do, in centers of civilization, or in communities where education awaits us almost from the hour of birth, we are prone to forget that the schools are paid for by each citizen. The school tax must be paid by landlords, and we pay the house-owners if we do not pay a direct school tax. We think of the schools as free and consequently we criticize them with our usual disregard for that which costs us nothing. We persist in complaining because we have half time, and crowded school-rooms.

It is right that we should be dissatisfied with the old, or that which we have, else there would be no progress, but we should look upon the school subject as though we were part owners, not as receivers of the country's bounty.

Looking past the regular day schools we find a list of those devoted to the blind, the deaf, and so on. There is not such a list as we would like to have, but it is a good one, considering how teachers in special schools are likely to segregate and so prevent their work from becoming generally known. The school for the deaf as it is now managed receives unto itself the deaf child anywhere from four or five years of age. I believe schools would gladly take younger pupils if the state legislatures made sufficiently large appropriations, and the rules of the institution were changed because of requests made by parents. This school must be father, mother, nurse, doctor, and home, besides fulfilling all the functions of a well-regulated institution of learning. The child is placed completely under the control of the management, and the latter accepts the charge, doing the best it can with the means at its disposal. The child is educated in the school in the manner considered by the board to be most successful.

At first the parents are unwilling to part with the little man, and are worried during his every absence, but as time goes on they become accustomed to his periodic absences and to his separation from the rest of the family circle. Finally they are content to know that their son is "doing well." It is a blessing that this happens, but the child fails to receive a part of his education if the parent does not keep up with his work.

The Mother Must Aid.

The mother should learn to appreciate the instruction which the child receives at the hands of his teacher or teachers, and should not take for granted that it is his due. Rather should she think of all that he will be, compared with all that he would have been, had he lived one hundred years ago. She should keep in touch with the lad's work, what he can do, can say, can understand, and so not fall behind him in his education. Seldom do parents try to use the information which the instructor gives them. Everything must be gone over with the child at home, if he is to learn to talk and to read the lips. He must not outgrow the mother's mental picture of his ability, or rather her vision must enlarge so as to really take in the child. He ceases to be a baby once he is launched at school. She must study the methods used in teaching him, learn why he uses short sentences (and then she may teach him long ones, if she is wise), know why his articulation is, perhaps, poorer than that of some other boy less clever, and why he behaves one way at home and another at school. In short, she must keep pace with him and his education. Thus she will help the child and learn to value his school.

The second common trait of humanity is also shown in the relation of parent to school. The power to adapt ourselves to circumstances may become an evil if carried too far. There is a grave danger of the mother's becoming used to someone's oversight of her deaf child, as it is so easy to say that the teacher knows best. This is a menace to the progress of the child. Parents and others who have deaf children away at school should spare no pains to keep in constant touch with teacher and pupil,

VACATION TIME

Deaf children from Miss Garrett's school (Philadelphia) enjoying themselves at Atalntic City

and should express appreciation of work accomplished, of headway made, but should keep in mind that they are not relieved of the pleasure and responsibility of bringing up the deaf child any more than the hearing child. To relegate the rearing of children to other than their parents is a mistake. Give a deaf child all the home he can get, unless you are quite sure that he is placed in surroundings which are homelike—and then do not let him miss one day of vacation. He will lose a little, perhaps, but he needs to know his home when a child if he is ever to love it as a man. The State can never be a mother in spite of Herbert Spencer's theory that the State would eventually take upon herself the entire care of children. The pendulum must swing back to normal, before long, and women must awaken to the fact that they must perform their duty as mothers, whether of hearing or of deaf children. Duty to the latter is more difficult because it must imply constant separations and reunions—a trying combination. There must be here, as everywhere, intelligent coöperation, a disposition on the part of the parent to share the responsibility with the trained public educator which, as a rule, only the government can afford to supply.

SELECTION OF A SCHOOL.

Are you looking for a school for your child? Is he still small? Then this is the time to investigate schools for the deaf, for as soon as a child is known to be deaf the parents should endeavor to learn as much as they can about schools and methods of teaching.

In the course of reading and studying her deaf child the mother will find herself constantly confronted by theories of one kind or another regarding methods of language-teaching, articulation, and lip-reading, but she should guard against forming any judgments, as papers and articles upon such matters are usually written for teachers and imply a vast amount of technical understanding of the subject. The fact that she must select a school for her child is no reason for her to choose the curriculum. She will, in all likelihood, be recommended to some school by the aurist who has pronounced the child to be deaf, but physicians are likely to judge a school by one or two pupils, brilliant or otherwise (successes or failures as the case may be), and not to have any real knowledge of the institution itself. I say this with all respect for the medical profession—we cannot expect them to be agents for schools as well as ear doctors.

Inspecting the Schools.

Once in possession of the name of one or more schools the mother should write for reports or catalogues, and when these are received study every part of them from cover to cover, finding out what method is used and what vacations there are. Before going to see any particular school she ought to decide as to whether she really wishes to send her child there or not, providing, of course, that the personal interview with those in authority proves satisfactory. She should not waste their time and hers by making a visit "just to see about it," a visit of inspection without intention of sending the child to the school. Once he is entered on the roll of the school he should be left physically and mentally in the hands of the principal and teachers, for all of them are anxious to make the most of the child for the credit of the school as well as for his own sake. They have given years of patient study to this special branch of education and know what to expect from the pupil far better than any one else can. They will do their best. The mother should, however, ask for any help she may need in order to carry out in the home some of the lessons taught in the school.

While this department is open to advocates of all methods I want to emphasize the necessity of finding a school where speech is well taught. To do this the mother should visit pupils in the home as well as in the class-room. This is possible only where she begins the study of the school question a year or more prior to the time when she means to send the child to school.

Disappointment is always sure to follow if parents are led to believe that the deaf child will eventually attend a school for hearing children. A few deaf children have done this and I dare say some will continue to do so, but the great majority of children born deaf or losing hearing before speech has been acquired are absolutely unable to keep up with the regular school work required of children whose hearing is normal—that is to say, if they are placed in our public schools without special attention in and out of school. It is wise for parents to look the matter in the face, and do the best that can be done for the deaf child, and to take advantage of the special schools where he may be educated.

THE DEAF CHILD AT SCHOOL.

A child leaving home to secure an education in a boarding school for the deaf finds himself in an entirely new atmosphere. His former associates have looked upon him as an odd member of society, one who should be judged by standards absolutely different from their own, one whose acts must be regarded as falling without the pale of the law governing the hearing population—an irresponsible child. Unluckily for the child himself, even the members of his own family have been led to the same conclusion and, naturally, expect him to be different from other children. They require little of him and excuse many faults. Leaving home is a tragedy to the child, but after all is said it is the best thing that could happen, unless the parents are exceedingly clever in discovering how to manage the lad. In the school

he finds his proper place. He "drops into" his niche. He is at once given duties which are his alone and for the performance of which he alone is responsible. He soon learns to do these well and soon shows real interest in his tasks. Before many weeks have elapsed he realizes that the children with whom he plays are under certain restrictions and he falls into their way, even imitating their manner towards the teacher and one another. This is but the natural result of mingling among children who are controlled by people understanding the peculiar needs of the deaf, teachers who have studied them and their wants, thereby being able to mold their characters as well as to teach them common-school subjects. The boy's changed attitude towards his school and playmates is probably the most noticeable benefit which he derives from his first year at school.

THE FIRST VACATION.

Danger of Non-Supervised Play with Hearing Children.

School being over, the child returns to his home to spend his first vacation. Among the friends of the family there is sure to be someone who has heard that the deaf child should constantly mix with hearing children, that he must learn to play their games with them, enter into their sports, do as they do, if he is to be really educated. One of two things is necessary to make non-supervised play even a partial success. Either the deaf child must have a natural aptitude for leadership, or the children with whom he plays must be specially gentle and thoughtful. If the former is the case he really needs to be guarded by some older person, as there is danger of his becoming selfish and overbearing, while too gentle playfellows will spoil the child. There is, however, very little likelihood of either of these things happening, for the normal child is usually a healthy little savage, and very apt to take every advantage of his weaker playmate which opportunity may afford. Of course the weaker one is unaware of the fact that he is being imposed upon and so we often see children who should be tenderly or at least thoughtfully dealt with the sport of other children or thrown into a violent passion, which is the result of teasing and is most detrimental to good mentality and bodily activity. We do not like, in the present state of civilization, to admit that our children are prone to repeat the acts of their ancestors, but we must own that this is true if we watch them at play. The deaf child needs to play with hearing children. By all means let him enjoy such companionship under proper supervision, but be sure that he is taught how to protect his own rights without infringing upon the rights of others. There should be just as much supervision as the teacher on duty at a public playground feels called upon to give to the children in her charge.

When, vacation over, the child returns to school, it rests absolutely with their guardians as to whether or no they return with stronger bodies, stronger moral principles, and a still better spirit of coöperation, or whether there will be mischief done which it will take the painstaking teacher weeks to eradicate, if it is possible to overcome it at all.

How to Advance the Child's Education During Vacation.

Are you trying during the vacation period to teach your child to understand what you say by insisting that he watch your lips? Are you endeavoring to teach him to "lip-read" one new sentence daily? Have you kept a list of these sentences, questions and commands? If not, procure a small address book and have the child carry this in his pocket. After he learns to understand something which you have said, write it under the proper initial letter and return the book to the child. Once or twice each week go over the entire list, noting how many are remembered. Drill on those which have been forgotten. If the boy is able to talk at all, teach him to express his ideas in sentence form, using the book in the same manner.

For instance, "Put away your coat and hat," should be entered under the letter P; while "What kind of a day is it?" belongs under W, and "Is it raining?" under I. When the lad wishes to tell you that father was late, write under F "Father was late at supper." Begin this work at once in as simple a manner as is necessary and you will be surprised at the number of everyday expressions that he MUST learn in order to be conversant with the general vocabulary of the home. If the child has difficulty in understanding what you say, you must persevere in your efforts to teach him to read your lips. Do you want him to become separated from you because he cannot understand what you say? You must *make* him understand by patient repetition.

At first, show him what you want done, telling him at the same time how to do it. The home is the place to learn home expressions, but unless you are willing to speak to him constantly you will find that he will soon be aware of the fact that he does not have to pay attention to what you say—that only at school must he be alert and ready to watch the faces of those about him. He will compare the school life with that of the easy-going home and prefer the latter, thus forming a distaste for what he most needs. He is well aware of the light in which you regard him and his whole future will be molded by your attitude. His conduct depends on your keeping in mind the fact that home is really life's kindergarten. If you want him to speak and to understand the speech of others, you must talk to him at all times upon all topics and insist that he answer intelligently and put his own thoughts into good English.

REMINISCENCES OF A RETIRED EDUCATOR

BY RICHARD ELLIOTT, M. A., L. H. D.,

Sometime Headmaster of the Royal School for Deaf Children, Margate, England

IV

OLD KENT ROAD SCHOOL AS IT WAS

MY knowledge of and acquaintance with the deaf before joining the staff of teachers at the Old Kent Road "Asylum" was absolutely *nil*. As a class they were, in those days, certainly not obtrusive. Although during the period of my life which had elapsed I had mixed pretty freely with all kinds of people of my class, and had seen many children, I do not think I had ever come in contact with one member of the class for which I was henceforward to labor, nor had any of the problems and possibilities of their education ever come under my

OLD KENT ROAD SCHOOL

As it was when Dr. Elliott first knew it—from an engraving by one of the graduates

notice. And, in this respect, I think I represented the great majority of the public that was not brought into direct contact with the few schools which had been founded for the benefit of the deaf.

To engage in teaching a class so entirely unknown, by ways and methods so diverse, as they appeared to be, from former practice, seemed to give a feeling akin to that of emigrating to a foreign country, and it was not without a considerable amount of hesitation that I decided to enter upon the work. But, with all the difficulties that then clung to it—many of which are now, happily, brushed away—I soon found that, as a branch of education, it was most interesting, I may say fascinating; and, having satisfied myself that it opened out a wide scope for usefulness, and that there was a possibility of my becoming a successful worker, my doubts were soon dispelled. In all

my subsequent career I never regretted my severance from ordinary education in favor of that of the deaf; and I have never met with one teacher who, having made the change as I did, desired to return to his former "hearing" pupils.

My introduction to the school and the new work took place in August, 1857. It was in an afternoon, after the termination of the school work, that I came in presence of the teachers, a row of whom was seated on one of the long desks. To my surprise, among them was Mr. Edmund Arkell, my former colleague, the *quondam* "usher" of the Westminster Central Schools, whose work there previously I had so much admired, and whom I had not seen since. He had been engaged at the "Asylum" about three years, and was then about to leave, having obtained a very good post in a commercial house, in which he eventually rose to a high position.

After my introduction to the staff I was conducted to my little bedroom, which overlooked a part of the playground. Here the boys were at play, and immediately under my window I saw for the first time, so far as I know, deaf-and-dumb boys. Two of them impressed themselves on my memory. I have seen somewhere a picture showing two boys in not very friendly relations with each other, and entitled "The wolf and the lamb." One of these deaf boys would have well personified the former and the other the latter. The "lamb" was crouched up against the wall protecting his face with his hands, while the "wolf" was pummeling him vigorously, accompanying his punishment with gestural comments then incomprehensible to me. He ended with three final punches, which he counted on his fingers, detailing, I suppose, by the accompanying signs, the particular delinquency each was intended to expiate. This was my introduction to the methods and manners of my future deaf pupils.

The "Asylum" was fairly well supported at this time. I have no statistics for this particular year, but in 1863 I find the subscriptions and donations amounted to £2,616; the income from dividends was £5,176; the legacies, much less than in some years, were £931. The favorable example of voluntary support these figures present is not now followed here or elsewhere; but happily, at the present time, more reliable sources of support are generally available.

Formerly, to enlist the sympathy of the public to induce support, I am afraid that methods and means, in some cases, were adopted which present ideas would hardly justify as characterized by good taste, or even honesty, and many contributors seemed to require a sort of *quid pro quo* for their charity. This appeared to be supplied by votes for the election of candidates, by exhibition of the wonders achieved in instruction, by parading of the manifest defects of the poor children, or by marshaling them in as interesting spectacles as possible before the eyes of the public. It was necessary, indeed, under the pressure of the circumstances that then prevailed, to make such arrangements as should best promote the object of money-getting.

A great proportion of the income of a school of this kind is legitimately devoted to the remuneration of the educational staff. Just before I commenced work at the "Asylum" this matter had engaged the attention of the committee, and the salaries paid, in comparison with those of other occupations and of other schools, were very fair. I myself commenced at a higher salary than had ever yet been paid to a

new teacher. Each was subject to an annual increment of £5 until the salary reached £100. This arrangement, however, did not apply to the female teachers, who were not, for a long time, paid adequately. The two then engaged in the school had each less than £20 per annum, and in 1873, when the number had increased to five, the highest salary was but £35.

The "Asylum" was situated in the Kent Road, and when built, in 1807, was in quite a suburban locality. It was just over a mile from London Bridge. According to modern standards the institution would have been considered to be overcrowded, there being then 306 children on the books, with an average of about 295 in school. There was a spacious detached infirmary, which was never, or only very rarely, fully occupied, the health of the pupils being very good, notwithstanding that comparatively little attention in those times was paid generally to hygienic or sanitary conditions. This favorable state, I think, was due to the general healthfulness of London as a city, and also to the dietary, which, although it included no changes nor any refinements in serving, was generous and nourishing.

The school-room, which was also the living-room of the boys, was a large L-shaped room, of which the larger arm was 99 feet by 30 feet. This was occupied by the boys. The smaller arm, in which the girls were taught, was 49 feet by 24 feet. Fixed parallel desks took up nearly the whole of the space, leaving only narrow gangways beside the walls. In these desks the classes were seated without any provision for isolation of the one from the other. There was not a single blackboard nor other writing surface for class instruction; there was, indeed, no available space whereon to place them if they had been present. It was held, I was informed, that they were unnecessary, and that, had they been there, they would have given to visitors the opportunity of asking inconvenient questions. There were no courses nor definite schemes of instruction in use, nor anything beyond manuscript lessons, which a teacher might, if he chose, prepare for himself, and which he kept to himself.

There were, however, certain requirements, such as learning by rote the conjugations of verbs,* the Church Catechism, writing exercises in composition, dictation by signs. The only printed lesson book I saw in occasional use was Dr. Watson's elaborate list of verbs and adjectives. An expensive and very useful illustrated vocabulary, got up in the best style of the engraver's art, had been published a short time previously, but no copies were seen in the school-room until some years afterwards. The vocabulary of nouns, prepared by Dr. Watson and published in 1806, was still in use. The pictures in this were quaint, although graphic. In many cases they were obsolete, while numerous common things, not formerly in existence, were absent from it. Thus there were no steamboats, railroads, policemen; but there was a striking engraving of the old watchman, with his rattle and lantern; of the clerk, with his quill pen; of the prisoner, with his chain. It is to be

* In taking charge of an intermediate class, in which learning the conjugations was a great feature in the instruction, I asked a boy who had written out faultlessly from memory the whole of the conjugation of the verb *to be* in all its moods and tenses, what was the meaning of the first person, present tense *I am*. He immediately answered by a sign, evidently pleased to be able to give, as he thought, an intelligent reply, "*jam*."

remembered that pictures were not so abundant in those days as now, and that therefore instruction was more dependent on those in use.

The pupils were arranged in eight boys' and five girls' classes. The duration of school was six hours per day, commencing at 6.55 a. m., except that on two days per week the afternoon school was not held. The boys had no industrial work except that of cleaning the lower part of their side of the house and the charge of the dining-room. The girls, on the contrary, had a great deal to do, and seemed to have no time at all for recreation.

They all wore a uniform. That of the boys consisted of a swallow-tailed coat, a waistcoat, and trousers, all made of good blue cloth and adorned with bright brass buttons. These latter were a great solace to the poor little newcomers, and they were never tired of admiring them. The girls' dress could not possibly foster any tendency to vanity, if such existed, either in pattern or material. It was made by themselves and their sewing mistresses. There was no difference made in the outfit for winter or for summer. The boys had no overcoats, but, big and little, wore indoors a thick black Holland pinafore, so that actually they were more thickly clad when indoors than when out.

Children were admitted between the ages of 8½ and 11½ years, and this rule was followed with very rare exceptions. Five years was the full period for instruction, but few remained after reaching 15 years of age. Admission was by election by the votes of subscribers; a few were paid for by friends at the rate of £25 per annum.

The system of instruction was based on signs. Articulation was taught in the beginners' classes, but after passing from these little or no attempt was made to complete or extend the instruction given. The subject was irksome to the teachers, both in itself and also from the unsatisfactory nature of the results. Practically, after the preliminary instruction, it was entirely neglected. Articulation as a subject was at this time in this country almost universally discredited by teachers of the deaf. There was nothing in the practice here that could supply a reason for its adoption elsewhere, or even for its continuance in the school itself. Only a slight perfunctory attention was paid to it, and this in time led to its almost entire discontinuance from the instruction. When, afterwards, I had charge of the highest classes I gave what time I could to it, because my four years' experience as teacher of the beginners' class gave me a most favorable opinion of the possibilities of such instruction. In this view I was almost or quite alone among my colleagues.

Apart from the case of the congenitally and entirely deaf, it seemed to me lamentable that so many boys and girls who came to us with a considerable remnant of speech or hearing should fail to receive that training which might have developed useful ability in speech, instead of its falling into life-long abeyance.

Lip-reading, which is now so important a feature in instruction, formed no part of the system which prevailed when I entered on my work, and none of the former pupils I met with appeared to have any ability in this subject. They invariably expected to be addressed by signs or the finger alphabet. Some reference to this subject was made in some stereotyped phrases in the annual reports. In illustration of what I have said above, I may quote an extract from the Report of the Association in Aid of the Deaf and Dumb for 1868. It says "that

it is claimed that all the children are taught to speak artificially, and that every pupil of ordinary capacity is made to understand by observing the motions of the lips of the speaker"; but of the many pupils "which come under the notice of the Association the committee dare affirm that not a single one can read a sentence from the lips." So low had oral teaching in England fallen, when this could be said about the only school which professed to give any attention at all to it.

The principal of the "Asylum," when I entered on my work there, was Mr. Thomas James Watson, son of the distinguished Dr. Joseph Watson, the first "teacher," as he was officially called. I saw but little of him, however, for during the short period I was under him he rarely came into school. I was told he gave most of his attention to his private pupils, of whom he had at one time, if not then, a considerable number. They were taught separately, and did not mix in any way with the other pupils. Mr. Watson's ability was spoken of with great respect by the teachers. Before succeeding his father he had been the headmaster of the Glasgow Institution for the Deaf and Dumb. He died after a short illness, in December, 1857, and was succeeded by his son, the Rev. James H. Watson, M. A., who had been appointed chief assistant four years previously.

Of the teachers then in the school, the only one remaining in the work after leaving the institution who gained a higher post was Mr. Alfred Large, who had charge, eventually, of Donaldson's Hospital, Edinburgh. A few years before my time Dr. David Buxton, of Liverpool; the Rev. Dr. William Stainer, and Mr. E. J. Chidley, of Dublin, were members of the staff. Two only were now deaf; in 1843, out of a total of 10, 6 were deaf, all having been pupils. The proportion of pupils, by the way, at the latter date, to say nothing of the large number of deaf-and-dumb teachers, would not suit modern requirements for 277 children, the number at that time. Of the two deaf teachers in the committee's employ, one, Mr. George Banton, took charge of and taught the principal's private pupils.

There was also a superannuated deaf teacher, Mr. William Hunter, who came daily and took charge of the boys' pocket money. He was one of the first pupils admitted to the "Asylum," and became, eventually, a teacher. He had just been pensioned off on his full salary of £150 per annum. Although born deaf and having not a scrap of hearing, he spoke without any defect in articulation, other than what might be ascribed to age. He did not, however, show otherwise any very high degree of intellectual culture. With the exception of the two deaf teachers, all the members of the staff were young—under 25 years of age. These, including myself, were 10 in number, with one boy of 15, and two female teachers under 20. The number of pupils on the books was 306.

(To be continued)

THE READERS' FORUM

LIVE QUESTIONS DISCUSSED FROM EVERY VIEWPOINT BY THOSE MOST INTERESTED—ALL LETTERS MUST BE SIGNED

The Mentality of the Born Deaf.

TO THE EDITOR:

It would seem that retarded development from the lateness with which the deaf child's education begins must make a permanent difference in the mental qualities of every born-deaf person; yet night before last I spent from 9 to 1.30 in the morning discussing with a born-deaf young man, who is making a reputation for himself in commercial circles in this city, as wide a range of subjects as could well be imagined for one evening's talk—politics, religion, woman's suffrage, art, literature, religion—and in all he showed himself perfectly at home.

His reasoning was sound, lucid, vigorous, and fluent. You could not possibly have found any difference in his mental makeup from that of any other educated man. Add to this that the conversation was carried on wholly by word of mouth on both sides. This young man was at one time a pupil of mine, and he was not then considered extraordinarily intelligent; he did only average work. The way in which he differs from the average deaf man is that he has continued to grow since leaving school. This is probably chiefly due to his environment. But does not the instance go to prove that there is no necessary difference between the mind of a born-deaf person and one born with all his senses?

I am inclined to think that if there is a difference in the mentality of the deaf, comparing them with the hearing, it is not due to deafness itself or to any deprivation therefrom, but to the methods under which they are educated, the language (so usually of signs) they use, the life they live, and the shadow cast by the general disbelief in their abilities under which they live.

Very sincerely yours, —— ——.

A Complimentary Discussion of Professor Ferreri's Paper.

THE NEW YORK SCHOOL FOR THE HARD-OF-HEARING.

TO THE EDITOR:

It is a pleasure to read Professor Ferreri's treatment of lip-reading in the June number of THE REVIEW. My work in teaching the adult hard of hearing, those who become deaf after having acquired speech, has long since convinced me of the psychological soundness of Professor Ferreri's point of view. Lip-reading, practically applied, is an *art*, not a science. "Art is knowledge made efficient by skill." And skill comes in any art only through practice. Professor Ferreri is right.

And yet, art is *knowledge* made efficient by skill. There are self-taught artists, painters, musicians, who have acquired skill simply through practice of their art without any real basic knowledge. There are self-taught lip-readers who have done the same. In the former case, it is without question that a thorough theoretical knowledge, together with the practical skill, would produce a higher degree of art than the practical skill alone. Why should it be less so in lip-reading? Why should not a thorough knowledge of the positions or movements for the different sounds be an aid to the lip-reader's practice? Only—and this is the crux of the whole question—these movements should not be studied as isolated phenomena, but as integral parts of words and sentences. That is, while I believe that the student of lip-reading should train the eye to associate certain movements with certain sounds, I also believe that the eye should make the association as the sounds and movements occur in words and sentences, not as formed singly by themselves. As I say in the Revised Edition of my book, Lessons in Lip-Reading for Self-Instruction, "In trying to see a movement for a certain sound, pronounce a word containing that sound and observe the movement in the word. Never try to say (or observe) the sound by itself."

This method of studying movements might be called a synthetical analysis. I have found it effective and decidedly helpful not only among my own pupils, but also for myself. My own knowledge of the movements is such that in listening to a phonograph, with the tubes in my ears so that I hear every sound, I seem to see simultaneously before me the mouth of the speaker forming every sound and word I hear. And it is entirely subconscious on my part; the image forms without any conscious effort whatever. I think sometimes that I actually do "hear with my eyes."

I think that what I have said will be found to be not dissent from Professor Ferreri's views, but rather something complementary thereto; for with his fundamental proposition that lip-reading is a matter of synthesis rather than analysis I am in most hearty accord.

Yours very sincerely,

EDWARD B. NITCHIE.

NEWS FROM ABROAD

A TREND OF EDUCATION FOR THE DEAF IN OTHER LANDS—SIGNIFICANT DEVELOPMENTS AND ACTIVITIES

BRITISH NOTES

By A. J. Story, Stoke-on-Trent, England,
Corresponding Editor of The Volta Review.

The National Association of Teachers of the Deaf of Great Britain and Ireland was founded in 1895, and succeeded the earlier Conferences of Headmasters, which met at irregular intervals. The National Association is divided into five branches, which practically cover the whole of the country: and this geographical distribution renders it possible for teachers to hold meetings at comparatively frequent intervals for the discussion of the problems of their work and the politics of their profession. The Association numbers some 300 members, or practically two-thirds of the whole number employed in British Schools for the Deaf.

Its objects are to advance the education of the deaf, to further the status of the teacher. It maintains the Arnold Library, almost the finest collection of works on the education of the deaf extant, and it publishes a biennial journal, "The Teacher of the Deaf," for the furtherance of educational knowledge among teachers as well as to be the official organ of the Association.

Need of an "English Volta Bureau"

So far Great Britain has never possessed such an agency for the dissemination of knowledge of the deaf as the Volta Bureau. The need for some such provision has been for a considerable time felt by the members of the Association. The official connection of the education of the deaf with the elementary school system of the country has brought the work largely under the notice of members of education committees, who are elected for the purpose of administering the various acts of Parliament relating to education, and the need for an agency to afford reliable information regarding the deaf becomes increasingly obvious.

From the purely didactic aspect of the work of educating the deaf it is clear to every teacher that an office wherein to record the various results achieved from the different experiments continuously being made is necessary. At present the different branches of work undertaken by the Association are located in various towns wherein those who voluntarily conduct such work may chance to reside. The splendid Arnold Library is domiciled in a London suburb, difficult of access. The official organ of the Association emanates from a midland town. The Associatian has no settled headquarters, and its name does not appear in the usual lists of learned or scientific societies.

The Proposal for a Central Agency

The increasing importance of the work of the Association, due probably to the increasing public recognition of the education of the deaf in Great Britain, has resulted in a proposal, made last year, by the editors of "The Teacher of the Deaf," that serious effort should be made to supply this long-felt want of central offices, with a permanent official in charge thereof, to be the center for the dissemination of information on all matters affecting the deaf; to be the home of the Arnold Library, the office of the Association's organ, and the place from which all effort should be put forth to forward the growing cause of the education of the deaf.

The executive, having previously appointed a committee to consider the whole matter, decided on the receipt of the report of the advisory committee to take steps to carry out the proposed scheme. It is hoped that the Association will be able to establish such an agency as will ultimately result in the fuller elevation of educational aims for the deaf of Great Britain.

Affiliated Bodies

Affiliated with the National Association, there are two Councils, of Headmasters of Residential Schools and of Head Teachers of Day Schools, respectively. These Councils exist for the consideration of questions specially relating to the distinctive types of schools they each respectively represent. It is hoped in many quarters that eventually the two Councils will combine for the consideration of educational matters which equally affect both. So far, however, this act of union has not been effected, but so strong is the tendency toward unity in the ranks of every section of teachers in Great Britain that it is almost certain that the movement toward combining the two Councils will, before long, be successful.

An interesting meeting of the Council of Headmasters of Institutions for the Deaf was recently held in Liverpool, when various matters connected with the present position of the education of the deaf were considered. The veteran Dr. Richard Elliott, now no longer in active charge of a school, gave place to Mr. W. Nelson, the headmaster of the Manchester Institution, as Chairman of the Council. Dr. Elliott was elected the first honorary member

of the Council, in recognition of his immense services to the deaf, extending over fifty years.

Certification of Teachers

For many years the special certification of teachers as competent to teach the deaf was conducted by three colleges, namely, the College of Teachers of the Deaf and those at Fitzroy Square (London), and Ealing. Some two years since the examinations of these three colleges were amalgamated under the style of "The Joint Examinations Board." It has long been the aim of the profession to secure the official recognition by the Board of Education of this expert examination of teachers of the deaf, and the examination held last summer was the first one so recognized. Teachers of the deaf in England will in future be required to possess the ordinary qualifications of teachers in normal elementary schools, and in addition the special certificate now recognized for the first time by the Board of Education, or to have taken the special paper on the education of the deaf set in the Government certificate examination.

The National Association has consistently advocated this double qualification of teachers, and before admission to the special examination of the joint examination board candidates desirous of qualifying as teachers of the deaf must have obtained one or other of the Board of Education's qualifications for ordinary elementary teachers. These regulations mark a great advance toward the ideal of the profession itself admitting those who shall become members of it, and it is hoped that eventually the examination of the joint board, being conducted as it is by acknowledged experts in the education of the deaf, will become the only recognized means of certifying teachers as competent for their special work.

The Question of Industrial Training

The new Chairman of the Council of Headmasters of Institutions for the Deaf, Mr. W. Nelson, has been for some years headmaster of the Manchester Institution, the second largest in Britain, which, under the late Mr. W. S. Bessant, gave the lead in industrial training to the deaf schools of England. The Manchester Institution now has a separate department for the industrial training of deaf youths from sixteen to twenty-one—the only provision of its kind in Britain. Mr. Nelson deprecates the teaching of trades during the legal school period, seven to sixteen, and asserts that this view is endorsed by the leading Continental authorities.

The Manchester Institution also has a special department, removed from the parent building, for the training of backward deaf children who require special methods of teaching. It is thus developing a system of classifying its pupils according to the educational treatment required by each section, and therefore seems likely to lead in this matter as it did years ago in manual training. Mr. Nelson is a recognized authority on the industrial training of the deaf, and, as he is still in the prime of life, he may be expected to do much toward settling this question, which of late has been approached in very various ways by the different schools in Great Britain—some of which begin to specialize in trades at the age of thirteen.

N. A. T. D.'s New Secretary

Mr. F. G. Barnes, of Homerton, London, has succeeded Mr. A. G. Smith as Honorable Secretary to the National Association of Teachers of the Deaf. Mr. Smith has done excellent work in the position during the past two years. Mr. Barnes is known to many teachers in America, and is of the energetic type required for the duties he now undertakes. The effort to create a Bureau of Information on the deaf for Great Britain will occupy him considerably. Mr. Barnes is an officer of the French Academy, and has before filled the post of Honorable Secretary to the Association.

Higher Training for Swedish Deaf Girls.

The seven district schools for the deaf in Sweden made the original private school for the deaf at the Swedish capital superfluous, as an elementary school, since the several provinces have institutions large enough to accommodate all the children applying.

In 1905, therefore, the directors transformed the "Silent School" (Tysta Skolan), into a place of higher training for deaf girls. They may be admitted from any portion of the country, when they have graduated from the elementary schools. The income is derived mostly from private donations, though there is a state appropriation also. Tuition and board are free.

Miss Anna Ahlberg, the head mistress, outlines the work of the school in her last report. The course, of two years, has been followed by 37 girls. Miss Ahlberg prefers to receive the girls at the impressible period immediately after graduation; that this new environment may not fail to the pupils' personalities.

The subjects taught, during the first work of the school, have been: language (including grammar and literature, themes, diaries, construction of advertisements, filling out of various blank forms, newspaper reading, etc.); Biblical studies, history of the Christian Church, arithmetic, geography, general history, sociology, and hygiene, with special regard to female physiology. The industrial training included: cooking, baking, table-setting, house cleaning, gardening, sewing, and weaving. The pupils were taught properly to care for their own rooms.

Frequently the students were taken to the museums of the capital, to factories and warehouses, where practical information could be acquired.

The school has made inquiries of ex-pupils as to the profit gained by their course, and the replies have shown full appreciation.—A. H.

CONTEMPORARY FOREIGN THOUGHT

Edited by ANDERS HANSEN, Direktor, DEN KGL. DÖVSTUMMESKOLE, Nyborg, Denmark

OPINIONS OF LEADING SPECIALISTS ABROAD, AND RESULTS OF RECENT INVESTIGATION IN THE OLD WORLD

ORGANIC DEFECTS AND SPEECH.

As was related in the June number of THE VOLTA REVIEW, at the Leipzig conference of German teachers of the deaf a resolution was carried recommending that a certain class of deaf children be freed from participation in oral training, on the ground of unsatisfactory results because of definite organic defects from which these pupils suffered.

Herr Otto Kraft, of Königsberg, has recently published some interesting information relating to this question; showing that even indubitable organic deficiencies may not altogether justify barring all children from oral training. The cases he mentions lie within his own class-room experience:

Case A.

The pupil K. B. lost hearing through meningitis cerebro spinalis at the age of four, and he entered school at nine, suffering from a cleft palate of serious nature. The boy was intelligent and made excellent progress, not only in writing but also in lip-reading and articulation. It goes without saying that, to a high degree, his pronunciation was nasal, and comprehensible only to persons who had made themselves familiar with this defect. But, despite this, Herr Kraft believes it a great boon that the child has been instructed orally. Effects of operation on him are given hereinafter.

Case B.

The boy F. K. lost hearing from scarlet fever when eight years old, and he was sent to school two years later, having a keen desire to gain a good command of language. The disease that brought deafness had caused a stiffness of the joints of the jaw. When he entered the school he was unable to open his mouth more than just enough to permit the admittance of a thin slice of bread. His speech was seriously affected by this trouble.

The teacher consulted a university professor, Dr. Garré, on the feasibility of operating on the two cases. It was declared practicable, and Herr Kraft invited to witness the operation at the hospital.

Operations.

Case A was considerably improved by the treatment, though the surgeon had previously declared that there would remain a fissure large enough for the passage of a certain amount of air when, normally, the soft palate would be raised. However, the boy's speech, especially his vowels, have been freed from nasal sound, to a considerable extent; and he has gained a life benefit. Where deaf children are thus handled, they should be given surgical treatment as early as possible—as is the case with hearing children.

Case B was treated regularly for a long time by placing a wooden screw between his teeth thrice a day, for a quarter of an hour at a time, to keep the jaw open to the (increased) extent now made possible by operation.

Case C.

This is one of recent occurrence. At the beginning of the school year, in August, 1909, a girl, E. K., was transferred from the Tilsit to the Königsberg institution. She was thirteen years old. Through scarlet fever, three years before, she had lost her hearing and the joints of her jaws had been stiffened.

She was treated surgically by another university professor, Dr. Wrede, and this was followed by almost complete recovery from the defect in the action of her jaws. She now masticates and articulates normally. By another operation, the surgeon placed her chin, which had been drawn too far backward, in a normal position. Furthermore, the child suffered from caries, and had only bits of teeth left. For this the dentist treated her. Through these several operations her appearance has been totally changed, and she now looks rather attractive. She is a bright pupil and has advanced enormously in articulation.

Herr Kraft believes the splendid results well worth the expense, and he expresses the hope that these three cases may induce other educators of the deaf not to give up oral instruction even when very unfavorable conditions seem to make it doubtful whether such instruction should be applied. He would have the manual alphabet and signs used only as the very last remedy for the mental training of the deaf child.—[Blätter.]—A. H.

BERLIN HOME FOR THE AGED DEAF

The first public body that conceived the idea of erecting a home for the aged and infirm deaf of Germany was the Central Union of the Deaf of Berlin, which had this desire as early as 1848. But it took many years to realize this cherished dream of a deaf man, Herr Fürstenberg, for sixty years elapsed before the building of the present home for 60 deaf persons. There is much ground for rejoicing at the culmination of the Fürstenberg scheme. The deaf of Berlin have made continual effort to save enough money to fulfill the plan. Few large donations have been received; the thing has been accomplished through the pennies of the poor, accumulated through decades.

At the recent dedication exercises the Rev. Schulz, pastor of the Berlin congregation of the deaf, gave an account of the history of the home. The buildings and grounds cost 122,000 marks. The house is situated in one of the suburbs of Berlin—at 26 Treskow Street, Hohenschönhausen. As may be seen in the accompanying illustration, it is of graceful architecture. Surrounding it is a large garden where the old people may busy themselves with flowers and vegetables. They are not expected to do any hard work; and are carefully attended. Religious services are held in the beautifully decorated chapel on alternate Sundays; and on many week-day evenings lectures are given.—[Blätter.]—A. H.

Gothembourg Preparatory School.

A preparatory school for deaf children of the compulsory-education age, eight and older, was opened in 1902 at Gothembourg, Sweden, as a sequence of the opening of preparatory schools for hearing children. Its foundation was due to the efforts of a society supported by subscriptions and donations.

The school, the only one of its kind in Sweden, is now found to be very successful. The age of admission has varied from three to seven. The age for leaving the school, to enter the distant Vänersborg institution, is fixed at between seven and eight. The average number in attendance has been from eight to ten. The aim is to develop individuality, through suitable exercises. Great stress is laid on the physical growth of the child. In case of need, a healthy summer residence is provided for weakling pupils.

NEWS AND COMMENT

HAPPENINGS OF GENERAL AND TECHNICAL INTEREST—HOW THEY APPEAR TO THE LAY AND PROFESSIONAL PRESS—ITEMS FROM OUR READERS SOLICITED

WISCONSIN SCHOOL NOTES

By Almira I. Hobart, Corresponding Editor, Delavan, Wis.

A skillful aurist and oculist, Dr. C. R. Treat, has been appointed by the State Board of Control to examine the pupils of the State School and provide treatment in case any is needed.

During the summer an addition to the school building has been erected, at a cost of about $17,000. It is a two-story cream brick structure, to correspond with the other buildings; containing twelve school-rooms, of which eight are to be completed by fall. For several years all the classes above twelve in number have been scattered in various rooms of the building, but hereafter practically all will be under one roof.

Miss Delia Delight Rice, for three years a teacher of the blind-deaf pupils in the Wisconsin school, who was chosen to organize the first school for the deaf in the Philippine Islands, has ended her first vacation in the home-land, and has again left for the Islands. On her way to the Pacific Coast she was given a reception at Delavan. Her school reopened the first of August, with a new feature in a department for the blind, of ten pupils.

Three boys and four girls were graduated in June, after a two-years' supplementary course in high-school studies. The experiment was inaugurated two years ago of having a high-school course for those students who would like to continue their education beyond the ten-year primary course. In the future this grade of work will probably be continued and extended.

Miss Sophia Alcorn, of the Kentucky School for the Deaf, by way of further preparation for teaching two blind-deaf girls, next year, has taken a trip to study the teaching of the blind-deaf in the Minnesota, Wisconsin, and Ohio schools.

The boys of the Delavan school have recently increased the sphere of their athletic activities by participating, for the first time, in a field meet with the boys of the public schools of Delavan and Elkhorn. While not victorious in all of the events, their score was creditable, and the occasion serves to make one more point of contact between the deaf and their hearing brothers.

A Speech-Teaching School in Turkey.

In September, 1908, Miss Galene Philadelpheus, of Marsovan, Turkey, entered the Normal Class at Clarke School, Northampton, Mass. She completed the course in June, but remained for another year's work before going back to her home.

On her return, she expects to open an oral school for deaf children in connection with a mission school in Marsovan.

MISS RICE'S SCHOOL FOR DEAF FILIPINOS

[Courtesy of The Wisconsin Times]

A number of the graduates of the Clarke School Training Class have contributed this year towards the establishment of this school, some of them having pledged themselves to pay a certain sum annually for five years. Others have made no pledge, but will no doubt contribute again. The amount thus far raised is $107.50, of which the Clarke School Summer Normal Class, of 1910, contributed $62. In addition this class has pledged itself to a further annual contribution of $40, a sum about sufficient to pay the expenses of a deaf child for a school year.

Miss Caroline A. Yale, principal of the Clarke School, has kindly consented to receive and transmit to Miss Philadelpheus any money

which may be contributed. Those having made pledges will be notified next year in due time. The money may be sent either to Miss Yale, or to Eleanor Jones, Fulton, Mo.

B. R. Allabough Takes Holy Orders.

Brewster R. Allabough, M. A., for years identified with the Western Pennsylvania Institution, at Edgewood Park, and an officer in many social and benevolent organizations of the deaf, has been ordained to the diaconate of the Protestant Episcopal Church by Bishop Whitehead.

Mr. Allabough is continuing his studies for the priesthood. Though he will, at present, go on with his teaching at the Western Pennsylvania Institution, he will eventually enter the field of missions among the deaf, working in conjunction with the Rev. Mr. Mann.

As a result of his teaching experience, "Mr. Allabough," says James A. Reider in "The Silent Success," "recommends 'Visible Speech' as a means of instruction for congenitally deaf children, as it gives a clear idea of the different vocal positions in articulation."

OBITUARY

Miss Floss A. Behymer

Miss Floss A. Behymer, one of the teachers in the primary grades of the Indiana School, died at her home in Franklin, Indiana, on July 17, after an illness lasting four weeks.

Miss Behymer had been connected with the Indiana School for five years, two of these years as a member of the normal training class and three years as a teacher. Her work as a normal student was so satisfactory that at the completion of her course she was retained as a regular teacher. F. L. G.

"Visible Speech" as an Aid to Esperanto

The following is taken from Washington press despatches of August 19:

The suggestion that an international alphabet might be utilized for the spread of the international language, Esperanto, was advanced in an address delivered last night before the International Esperanto Congress. The speaker was Prof. W. J. Spillman, Chief Agriculturist in charge of farm management, Department of Agriculture. Professor Spillman is a leader in the Esperanto movement, being chairman of the Executive Committee, Esperanto Association of North America, and also chairman of the local Esperanto Congress Committee. His remarks, which were made in Esperanto, were illustrated with a number of lantern slides.

"Visible Speech" is the international alphabet which Professor Spillman brought to the attention of his Esperantist audience. This system, said Professor Spillman, is so called for the reason that the characters not only express any sound that the human voice is capable of making, but also tell the reader how to make the same sound himself; and not only that, but the alphabet will also indicate pitch and tone of voice, rapidity of utterance, the emphasis to be placed on phrases, and the accent for syllables. Thus when a student has mastered Visible Speech, with its aid he is not only able to pronounce Esperanto at sight, but any other language as well, even if he has never heard it spoken.

Professor Spillman said that a great handicap to the spread of Esperanto in the Orient arose from the fact that the new language contains a number of sounds not expressed in Asiatic tongues, and which the peoples of the East consequently have no idea of how to make. The Roman alphabet, now used in Esperanto, cannot help them to make these sounds, as the letters in this system are simply names for the various sounds without indicating how the sounds are to be made. If Esperanto should be written in "Visible Speech" these Asiatic peoples, contended the speaker, would have a series of sound-pictures showing them how to pronounce the language and its spread would therefore be facilitated in that region of the earth.

A good working knowledge of "Visible Speech," Professor Spillman asserted, could be obtained in six hours' study. It is so easy to learn because there is next to nothing in it to remember. All the characters are built up out of four elements, used in various combinations. These four elements consist of a curve, a straight line, a wavy line, and a dot.

The system, said Professor Spillman, was devised by Prof. Alexander Melville Bell, father of Dr. Alexander Graham Bell, inventor of the telephone. In honor of its discoverer, it has been termed the Melville Bell Speech Symbols, or Universal Alphabetics, but it is more popularly known as Visible Speech.

"Seeing Sounds."

"The Delineator," for July, has an interesting and valuable article of the above title, written by Robert A. Sanborn, describing the miracles of lip-reading as taught to children. It deals with observations made at the Rheinhardt School for Deaf Children, Kensington, Md.

A Correction.

In the June number's reprint of "Discipline," by the late Dr. W. H. De Motte, two sentences were erroneously printed. The first part of the last paragraph should read, "From the fact that gentle measures are most effective with children, one may not jump to the conclusion that gentleness is all. Teachers of brief experience have found that gentleness, unless backed up by firmness, is worst of all dispositions."

Economic Efficiency of the Deaf

The Convention of American Instructors of the Deaf, at its next meeting in Delavan in the summer of 1911, will hold an international exhibit of industrial products, to which all schools for the deaf throughout the world are to be asked to contribute. Professor Warren Robinson, Chairman of the Convention's Industrial Section, announces that the exhibit is planned to show the proficiency of deaf children in woodwork, domestic science, printing, leather work, metal work, drawing, mason work, bookbinding, tailoring, photography, and agriculture.

This exhibit is undertaken as part of the work of educating the public to realize that the deaf are capable not only of sustaining themselves, but of prospering in business, in the arts, and in the crafts, and that, too, against sharp competition from their unhandicapped fellow-workers. Another phase of this same work is being promoted by Professor Robinson as editor of "The American Industrial Journal," an illustrated magazine issued five times a year at Delavan, Wis., as the official organ of the Convention's Industrial Section. Nearly the entire contents of "The American Industrial Journal" consists of the personal experiences of deaf men who have succeeded. Generally the story of their success is told in their own words. The leading article of the current number tells of a deaf man who has succeeded as a poultry raiser and bee-culturist on a large scale, and this is followed by personal accounts of successes won by the deaf as skilled operators of typesetting machines and as trusted employés of the Government. To those who believe that anything is possible for the man with grit, "The American Industrial Journal" is a source of constant inspiration.

PROFESSOR WARREN ROBINSON, CHAIRMAN OF THE CONVENTION'S INDUSTRIAL SECTION.

International Congress on Home Education

An International Congress for the education and protection of children in their homes was held in Brussels, August 21-25th, during the Universal Exhibition. This was the third Congress of its kind, and was held under the patronage of the Belgian government. The first was attended by over 1,200 members, and twenty foreign governments were represented. The second was equally successful.

The Congress consisted of five sections:

Section 1. *The study of childhood* (pedology);

Section 2. *The education of children;* (*a*) general questions; (*b*) the education of children by their parents in the home; (*c*) coöperation of the family with the school; (*d*) education in the home after school;

Section 3. *Abnormal children;*

Section 4. *Various subjects relating to childhood;*

Section 5. *Documentation.*

The usefulness of associations of parents for the study of childhood.

Limitation of sedentary habits in the school and at home at various ages.

Development of initiative and responsibility.

Instructive occupations for children.

Hereditary evils. Ways of counteracting their bad effects.

Educative books. Prepared lists of the best picture books for children of from 3 to 7 years; the best illustrated books for children from 7 to 12 years; idem from 12 to 16 years; idem from 16 to 20 years.

Subjects which tire the pupils least. Length of lessons, order in which the subjects should be taught.

Study in the home of a child's natural aptitudes.

Study of the nature, the defects, and the tendencies of children.

One session was devoted to special work and will include education of the deaf. Any topics of interest to parents, presented at this session, will be discussed in the Home Training Department in future issues of the REVIEW.

THE UNIVERSAL ALPHABETICS

CONDUCTED BY M. GARDINER

MONTHLY LESSONS IN MELVILLE BELL SPEECH SYMBOLS, THE MASTERY OF WHICH ENABLES THE STUDENT CORRECTLY TO PRONOUNCE ANY SOUND IN HUMAN SPEECH

[1]

[1] From "Visible Speech Miscellanies," a manuscript book containing stories transcribed in symbols by students of the School of Vocal Physiology, conducted by A. Graham Bell, 1874.

The Tree.

A tree stands green on the hill-top
Where the sun shines bright and free;
Its leaves are fanned by the fair wind
And by the storm swept free.

The tree would fain be a ship
That sails the seas so far,
Would fain be a mighty ship
With room for many a tar.

The tree would fain be a church
Where the chimes ring out so fair,
Would fain be a church with pews
And many a worshiper there.

The tree would fain be a king
That sits on a throne so high,
Would fain be a king and feel
The power in his hand lie.

The tree would fain be a tree
Where it stands on the hill-top green,
Would fain be a tree with leaves
And fruit that is fair to be seen.

Then come there axes and cut
The tree down where it grows,
Then hew it and shape it as fits
Their will and their purpose and knows.

Björnstjerne Björnson.

EURELIA

EURELIA wrote a letter to me, and I answered it. Then I received another letter from her, and I answered that. Then I received a third letter from her, and I answered that. Then I received a fourth letter from her, and I answered that. Then I received a fifth letter from her, and I answered that. Then I received a sixth letter from her, and I answered that. Then I received a seventh letter from her, and I answered that. Then I received an eighth letter from her, and I answered that. Then I received a ninth letter from her, and I answered that. Then I received a tenth letter from her, and I answered that. Then I received an eleventh letter from her, and I answered that. Then I received a twelfth letter from her, and I answered that. Then I received a thirteenth letter from her, and I answered that. Then I received a fourteenth letter from her, and I answered that. Then I received a fifteenth letter from her, and I answered that. Then I received a sixteenth letter from her, and I answered that. Then I received a seventeenth letter from her, and I answered that. Then I received an eighteenth letter from her, and I answered that. Then I received a nineteenth letter from her, and I answered that. Then I received a twentieth letter from her, and I answered that. Then I received a twenty-first letter from her, and I answered that. Then I received a twenty-second letter from her, and I answered that. Then I received a twenty-third letter from her, and I answered that. Then I received a twenty-fourth letter from her, and I answered that. Then I received a twenty-fifth letter from her, and I answered that. Then I received a twenty-sixth letter from her, and I answered that. Then I received a twenty-seventh letter from her, and I answered that. Then I received a twenty-eighth letter from her, and I answered that. Then I received a twenty-ninth letter from her, and I answered that. Then I received a thirtieth letter from her, and I answered that. Then I received a thirty-first letter from her, and I answered that. Then I received a thirty-second letter from her, and I answered that. Then I received a thirty-third letter from her, and I answered that. Then I received a thirty-fourth letter from her, and I answered that. Then I received a thirty-fifth letter from her, and I answered that. Then I received a thirty-sixth letter from her, and I answered that. Then I received a thirty-seventh letter from her, and I answered that. Then I received a thirty-eighth letter from her, and I answered that. Then I received a thirty-ninth letter from her, and I answered that. Then I received a fortieth letter from her, and I answered that. Then I received a forty-first letter from her, and I answered that. Then I received a forty-second letter from her, and I answered that. Then I received a forty-third letter from her, and I answered that. Then I received a forty-fourth letter from her, and I answered that. Then I received a forty-fifth letter from her, and I answered that. Then I received a forty-sixth letter from her, and I answered that. Then I received a forty-seventh letter from her, and I answered that. Then I received a forty-eighth letter from her, and I answered that. Then I received a forty-ninth letter from her, and I answered that. Then I received a fiftieth letter from her, and I answered that. Then I received a fifty-first letter from her, and I answered that. Then I received a fifty-second letter from her, and I answered that. Then I received a fifty-third letter from her, and I answered that. Then I received a fifty-fourth letter from her, and I answered that. Then I received a fifty-fifth letter from her, and I answered that. Then I received a fifty-sixth letter from her, and I answered that. Then I received a fifty-seventh letter from her, and I answered that. Then I received a fifty-eighth letter from her, and I answered that. Then I received a fifty-ninth letter from her, and I answered that. Then I received a sixtieth letter from her, and I answered that. Then I received a sixty-first letter from her, and I answered that. Then I received a sixty-second letter from her, and I answered that. Then I received a sixty-third letter from her, and I answered that. Then I received a sixty-fourth letter from her, and I answered that. Then I received a sixty-fifth letter from her, and I answered that. Then I received a sixty-sixth letter from her, and I answered that. Then I received a sixty-seventh letter from her, and I answered that. Then I received a sixty-eighth letter from her, and I answered that. Then I received a sixty-ninth letter from her, and I answered that. Then I received a seventieth letter from her, and I answered that. Then I received a seventy-first letter from her, and I answered that. Then I received a seventy-second letter from her, and I answered that. Then I received a seventy-third letter from her, and I answered that. Then I received a seventy-fourth letter from her, and I answered that. Then I received a seventy-fifth letter from her, and I answered that. Then I received a seventy-sixth letter from her, and I answered that. Then I received a seventy-seventh letter from her, and I answered that. Then I received a seventy-eighth letter from her, and I answered that. Then I received a seventy-ninth letter from her, and I answered that. Then I received an eightieth letter from her, and I answered that. Then I received an eighty-first letter from her, and I answered that. Then I received an eighty-second letter from her, and I answered that. Then I received an eighty-third letter from her, and I answered that. Then I received an eighty-fourth letter from her, and I answered that. Then I received an eighty-fifth letter from her, and I answered that. Then I received an eighty-sixth letter from her, and I answered that. Then I received an eighty-seventh letter from her, and I answered that. Then I received an eighty-eighth letter from her, and I answered that. Then I received an eighty-ninth letter from her, and I answered that. Then I received a ninetieth letter from her, and I answered that. Then I received a ninety-first letter from her, and I answered that. Then I received a ninety-second letter from her, and I answered that. Then I received a ninety-third letter from her, and I answered that. Then I received a ninety-fourth letter from her, and I answered that. Then I received a ninety-fifth letter from her, and I answered that. Then I received a ninety-sixth letter from her, and I answered that. Then I received a ninety-seventh letter from her, and I answered that. Then I received a ninety-eighth letter from her, and I answered that. Then I received a ninety-ninth letter from her, and I answered that. Then I received a one hundredth letter from her, and I answered that.

Waiting.

Baa-baa black sheep,
Have you any wool?
Yes, sir, yes, sir,
Three bags full;
One for the master,
And one for the dame,
But none for the little boy
Who cries in the lane.

From "Song Stories for Little Folk."

KEY TO THE MELVILLE BELL SYMBOLS.

CONSONANTS.

ᗡ	as	in	ᗡᖴ	pay
ᗞ	as	in	ᗞᖴ	tay
ᑫ	as	in	ᑫᖴ	K
ᗷ	as	in	ᗷᖵᖶ	beau
ᗯ	as	in	ᗯᖵᖶ	dough
ᘓ	as	in	ᘓᖵᖶ	go
ᗾ	as	in	ᗾᒧᗾ	tum
ᗰ	as	in	ᗞᒧᗰ	ton
ᘐ	as	in	ᗞᒧᘐ	tongue
ᗝ	as	in	ᗝᖴ	hay
ᑐ	as	in	ᑐᖴ	whey
ᗭ	as	in	ᗭᖴ	weigh
ᗤ	as	in	ᗤᒧᖶ	fie
ᗤ	as	in	ᗤᒧᖶ	vie
ᗅ	as	in	ᗅᒧᖶ	thigh
ᗅ	as	in	ᗅᒧᖶ	thy
ᑘ	as	in	ᑘᖷ	see
ᗐ	as	in	ᗐᖷ	Zee
ᘯ	as	in	ᘯᖷ	she
ᘭ	as	in	ᘯᖵᘭ	rouge
ᑎ	as	in	ᑎᖵ	hue
ᗰ	as	in	ᗰᖵ	you

CONSONANTS.

ᑕ	as	in	ᑕᑘᖵ	crew
ᘺ	as	in	ᘓᘺᖵ	grew
ᘺ	as	in	ᑕᘺᖵ	clue
ᘺ	as	in	ᘓᘺᖵ	glue

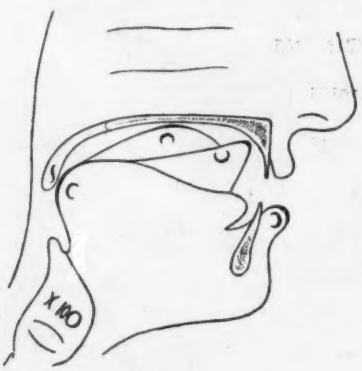
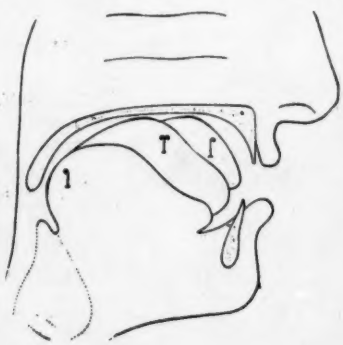
VOWELS.

ᒪ	as	in	ᗷᒪᘔ	beat
ᒪ	as	in	ᗷᒪᘔ	bit
ᖷ	as	in	ᗷᖷᘔ	bait
ᒷ	as	in	ᗷᒷᘔ	bet
ᒷ	as	in	ᗷᒷᘔ	bat
ᖵ	as	in	ᗞᖵᘺ	pool
ᖵ	as	in	ᗞᖵᘺ	pull
ᖶᖵ	as	in	ᗞᖶᖵᘺ	pole
ᖶ	as	in	ᗞᖶᘺ	Paul
ᖶ	as	in	ᗞᖶᘺ	Poll
ᒧ	as	in	ᗷᒧᘔ	but
ᒧ	as	in	ᒧᘐᑕ	ask
ᒍ	as	in	ᒍ	ah
ᒣ	as	in	ᗝᒣᕀ	her
ᒧᖷ	as	in	ᗝᒧᖷ	high
ᒧᖵ	as	in	ᗝᒧᖵ	how
ᖶᖷ	as	in	ᗝᖶᖷ	hoy

GLIDES.

ᶻ	or	ᖵ	a glide towards	ᗾ	or	ᖵ	;	ᗯᒧᶻ	or	ᗯᒧᖵ , now
ˠ	or	ᒪ	a glide towards	ᘺ	or	ᒣ	;	ᗷᒪˠ	or	ᗷᒪᒣ , beer
ˣ	or	ᖷ	a glide towards	ᗰ	or	ᖷ	;	ᗷᒧˣ	or	ᗷᒧᖷ , my

BASIS FOR CONSONANT SYMBOLS.



BASIS FOR VOWEL SYMBOLS.